Supreme Court, U.S. F I L E D

NOV 30 1989

JOSEPH F. SPANIOL, JR. CLERK

IN THE

SUPREME COURT OF THE UNITED STATES

October Term, 1989

LANTECH, INC.,

Petitioner,

versus

KAUFMAN COMPANY OF OHIO, INC.,

Respondent.

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

JOHN S. REED

Counsel of Record

JOHN E. SELENT
MICHAEL A. VALENTI
MARY R. HARVILLE
HIRN REED HARPER & EISINGER

2450 Meidinger Tower Louisville, KY 40202 (502) 585-2450

Counsel for Petitioner

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QUESTIONS PRESENTED

- 1. Whether the Court of Appeals may affirm a legal determination that a patent is invalid because the invention would have been obvious under 35 U.S.C. § 103 even though: (a) the District Court made conflicting findings of fact both that there was and there was not a causal nexus between the benefits of the invention and the undisputed objective indicia of nonobviousness; (b) the Court of Appeals did not determine either set of findings to be clearly erroneous; and (c) the causal nexus findings which compelled the opposite conclusion of nonobviousness were final and not reviewable because they were a necessary part of the unchallenged infringement determination?
- 2. Whether, consistent with Graham v. John Deere Co., 383 U.S. 1 (1966), an invention may be denied patent protection for obviousness under 35 U.S.C. § 103 based solely upon the District Court's view of the prior art: (a) "notwithstanding" uncontested objective evidence of nonobviousness that the invention satisfied a long-felt need, was copied by and licensed to others who previously either had not recognized the problem or had failed to solve it, replaced the state-of-the-art and achieved great commercial success; and (b) despite detailed, unchallenged causal nexus findings that establish how the patented invention and its benefits revolutionized an entire industry and show why a person having ordinary skill in the art would not have found the invention obvious from the specific prior art elements selected and combined by the District Court?

RULE 28.1 STATEMENT

Petitioner Lantech, Inc. has no parent companies, no subsidiaries except wholly owned subsidiaries, and no publicly held affiliates. All parties in the Court of Appeals are listed in the caption of this case in this Court.

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No.	

IN THE

SUPREME COURT OF THE UNITED STATES

October Term, 1989

Lantech, Inc., - - - - - Petitioner,

v.

Kaufman Company of
Ohio, Inc., - - - - - Respondent.

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

Petitioner Lantech, Inc. respectfully requests that a writ of certiorari issue to review the judgment of the United States Court of Appeals for the Federal Circuit, entered in its Case No. 88-1541, -1551 on June 16, 1989. The first question presented addresses a departure by the District Court and the Court of Appeals from the "accepted and usual course of judicial proceedings," as contemplated by Rule 17.1(a) of the Rules of this Court, so fundamental and apparent that the Court may wish to consider summary reversal pursuant to 28 U.S.C. § 2106 and Rule 23.1 of the Rules of this Court.

OPINIONS BELOW

The opinion of the Court of Appeals and the dissentin-part (Bissell, J.) are designated as not prepared for publication, but nonetheless are reported at 12 U.S.P.Q.2d 1076. They are reprinted in the appendix to this petition ("Pet. App."), page 1a. The judgment and findings of fact and conclusions of law of the United States District Court for the Northern District of Ohio (Potter, J.) are unreported (Pet. App. 8a).

JURISDICTION

The jurisdiction of the District Court was invoked under 28 U.S.C. § 1338(a). The exclusive jurisdiction of the Court of Appeals for the Federal Circuit was invoked under 28 U.S.C. §§ 1292(c)(2) and 1295(a)(1).

The judgment of the Court of Appeals was entered on June 16, 1989 (Pet. App. 67a). Lantech's timely petition for panel rehearing was denied on September 1, 1989 (Pet. App. 68a). The jurisdiction of this Court is invoked under 28 U.S.C. § 1254(1).

CONSTITUTIONAL PROVISION, STATUTE AND RULE_INVOLVED

U.S. Const. art. I, § 8, cl. 8

The Congress shall have Power . . . to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries; . . .

35 U.S.C. § 103

Conditions for Patentability; Non-obvious Subject Matter

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Federal Rule of Civil Procedure

Rule 52

(a) Effect. In all actions tried upon the facts without a jury or with an advisory jury, the court shall find the facts specially and state separately its conclusions of law thereon, and judgment shall be entered pursuant to Rule 58; Findings of fact, whether based on oral or documentary evidence, shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge the credibility of the witnesses. . . .

STATEMENT OF THE CASE

Lantech is the world leader in the manufacture of stretch-wrap packaging machinery. Respondent Kaufman Company of Ohio, Inc., is a direct competitor in the United States. Stretch wrapping is a process of packaging or "unitizing" a load for shipping and storage by stretching plastic film and wrapping it around the load. (A 376, 443-45, 452)1 Such loads usually comprise boxes, trays or bags of products assembled together, for example, on a 40" x 48" pallet or similar support at the end of a production line or in a shipping facility. Products shipped this way include the vast majority of nonperishable consumer products sold in supermarkets, drug stores and department stores. Since 1982, the "powered prestretch" process covered by the patent at issue in this case, United States Patent 4,418,510 (the "'510 patent") (E 148-61), has been the dominant form of stretch-wrap packaging for pallet-sized loads.

The powered prestretch process of the '510 patent has dramatically reduced the amount of film necessary to

¹Record citations are to the joint appendix in the Court of Appeals ("A ___''), to the exhibit volume of that appendix ("E __''), or to joint trial exhibit number ("JX __'').

unitize a load without reducing, and in many cases enhancing, the quality of the package. It has done this by reliably elongating stretch films to high stretch levels, above their "yield points" and in their "inelastic ranges" (Finding S1a, Pet. App. 28a-29a), never before possible in commercial stretch wrapping operations. This has caused the overwhelming commercial success of the process. (A 552-55; Findings 57, 96, 97; Pet. App. 22a-23a, 35a-36a)

1. The "Real World" Context Of The Invention Of The Powered Prestretch Process.

"Conventional" stretch wrapping, as exemplified by Lantech's United States Patent 3,867,806 (the "'806 patent") (E 25-31), was the state of the art from its introduction in 1973 until 1980. (A 482-89, 860-63) In this process, the film supply roll was retarded by a braking device which caused the film to stretch as it was pulled by the rotating load, which was wrapped in multiple layers of film. (A 9, 376, 462-72, 707-08)

Despite its success, the conventional stretch wrapping process was commercially limited to elongating films only in their elastic ranges below their yield points. (Finding 64, Pet. App. 24a) Brochures and sales materials of stretch wrapping machinery and film manufacturers reflected promised film elongation levels of no more than 30%. (A 496-98; E 64-69) The precise nature and cause of this persistent conventional stretch limitation was not understood at the time. (A 483-98) Lantech and others in the industry all failed in their efforts to modify the conventional process or to improve conventional machines to enable them to stretch film to high stretch levels without the film randomly breaking. (A 462-72; E 466-68)

Through original research in 1977-79 (A 487-520), Patrick and William Lancaster, owners of Lantech, finally discovered the limitation to be the inherent inability of any plastic film to withstand the high and fluctuating forces of conventional stretch wrapping when the film had been elongated into its inelastic range above its yield point. (A 520-37) Yet, it was only by stretching films into their inelastic ranges that significant film-usage reductions and cost reductions might be realized. (A 507-10)

Armed with this knowledge, the Lancasters conceived the powered prestretch process disclosed and claimed in the '510 patent as a way to wrap loads with film which had first been permanently elongated, or "prestretched," to well over 100% at high but constant forces between closely spaced stretching rollers. This compared very favorably with the typical 10-15% elongation between the film supply roll and the load in conventional stretch wrapping. (A 372, 517)

2. The Undisputed Objective Indicia Of The Nonobviousness Of The Powered Prestretch Process.

The powered prestretch process of the '510 patent cut in half the cost of unitizing incurred with "conventional" stretch wrapping. (A 552-55, 877-78, 892-96; JX 251, 252) As a result, the invention disclosed and claimed in the '510 patent has been an enduring commercial success and remains the industry standard.

Lantech introduced powered prestretch at a trade show in November 1980 when all its competitors were marketing conventional stretch wrapping. (A 860-63, 886-89) Although competitors first disparaged the powered prestretch process (A 886; JX 234), within six months nearly all of Lantech's major competitors were making and selling

machines designed for the sole and express purpose of practicing the powered prestretch process. (A 888-89) In April 1982, Kaufman discontinued its then-standard form of stretch wrapping. Since then, virtually all of Kaufman's stretch wrapping machines have been made to practice the powered prestretch process of the '510 patent (A 977-78; Findings 87-99, Conclusion 93, Pet. App. 32a-36a, 60a).²

By April 1982, powered prestretch machines had been fully commercially developed, and the powered prestretch process had become the predominant form of stretch wrapping. (A 902; E 162-69) Within the next three years, it had displaced all other forms of stretch wrapping from the vast majority of applications for which stretch wrapping is used. By 1985, powered prestretch machine sales accounted for about 90% of Lantech's machinery sales by dollar volume. (A 902-13; E 170-81) With the exception of Kaufman and one other competitor which Lantech has sued for infringement in a case still pending but stayed until this case is ended, all significant competitors of Lantech have taken licenses under the '510 patent. (A 381, 658-61; JX 203)

3. The District Court's Uncontested Findings Of Objective Indicia Of Nonobviousness And The Causal Nexus To The Benefits And Merits Of The Invention.

Lantech brought this patent infringement action against Kaufman in 1985, invoking the jurisdiction of the United States District Court for the Northern District of Ohio pur-

²The film-driven prestretch machines and process Kaufman discontinued were then the focus of a Lantech infringement suit against Kaufman on another patent. The Federal Circuit eventually affirmed a district court judgment against Kaufman awarding Lantech double damages for willful infringement. *Kaufman Company, Inc.* v. *Lantech, Inc.*, 807 F. 2d 970 (Fed. Cir. 1986).

suant to 28 U.S.C. § 1338(a). The case was tried without a jury.

As a principal beneficiary of the "spectacular" (A 1454-55) commercial success of the powered prestretch process it copied, Kaufman has never denied this market impact, nor did it introduce any contrary evidence at trial. Therefore, the District Court made detailed findings based upon specific, undisputed objective evidence of nonobviousness, including satisfaction of a long-felt need, commercial success, competitive disbelief followed by positive response and copying, and licensing agreements taken by Lantech's competitors. (Findings 51-52, 54-60, Pet. App. 21a-23a) At the heart of these findings is number 57:

The totality of the evidence establishes that Lantech's powered prestretch machine practicing the claims of the '510 patent as demonstrated at the 1980 PMMI [trade show] with levels of elongation beyond the yield point and a reduction of force of [sic, on] the load achieved commercial success in the United States marketplace.

In the context of deciding that Kaufman contributorily infringed the '510 patent, the District Court made necessary findings (Findings 95-99, Pet. App. 35a-36a) which showed that the machines sold by Kaufman were "especially made or especially adapted for use in an infringement of [the] patent, and not a staple article or commodity of commerce suitable for a substantial noninfringing use." 35 U.S.C. § 271(c). Uncontested findings 96 and 97 are also directly relevant to the objective evidence of nonobviousness.

These are "causal nexus" findings which expressly identify the root cause of the commercial success of the powered prestretch process and the other objective indicia of its nonobviousness. The powered prestretch process is

uniquely desirable because the film is first elongated to a very high level and then that elongation level is maintained even though the force on the film has been lowered to facilitate the wrapping of the load. The resulting unit-cost savings are more than enough to justify the increased capital cost of a powered prestretch machine as compared with a conventional stretch wrapping machine:

- 96. If the yield point were not exceeded, the critical benefits of the invention could not be achieved and one would merely have an expensive conventional stretch wrapping machine. A significant benefit of the invention is the ability to prestretch to high elongation at high forces and then to wrap with lower forces on the load, while maintaining most of the high elongation of the prestretch.
- 97. Based upon all the evidence, the Court finds that the only substantial economic and practical use of powered prestretch wrapping machines such as Kaufman's SCIII is in the practice of the process disclosed and claimed in the '510 patent. Any other stretch wrapping use would be a conventional stretch wrapping operation which could not be justified economically by one who had spent the funds necessary to purchase one of these powered prestretch machines.

(Pet. App. 35a-36a)

The District Court also made a series of uncontested findings which show that the prior art French Patent 2,281,275 to Thimon (E 1-24) did not teach or suggest stretching film above its yield point. "[T]he Thimon patent does not explicitly disclose a process of elongating film [to] levels over its yield point. Further, the specifications and claims do not describe the increased strength characteristics obtained when film is stretched over its yield."

(Finding 47, Pet. App. 20a) "[T]he '510 patent had the added improvement over Thimon of stretching film beyond the yield point." (Conclusion 35, Pet. App. 45a)

Because the earlier "prestretch" process of the Thimon patent did not involve stretching film over its yield point, it would have used no less film than any "conventional" stretch wrapping process. The District Court properly found:

[T]he convent and stretch wrapping machines were not being used in a commercially repetitive environment to stretch film beyond its yield point.

(Finding 64, Pet. App. 24a)

It was undisputed that the process disclosed in the Thimon patent was never commercialized despite the fact that its owner was a leading European stretch wrapping machinery manufacturer. (A 699-705, 1394-95, 1405-13; E 36-63) Based upon the evidence and the District Court's findings, even if the Thimon process had been used for its limited stated purpose of reducing forces on the film as it was wrapped on the load, the Thimon process would not have produced the film savings and resulting cost savings which made the '510 process a huge success.

4. The District Court's Contested Finding Attributing Lantech's And Kaufman's Commercial Success To The Prior Art Thimon Patent.

Nevertheless, the District Court made a lone conflicting finding based upon its view of the prior art, not upon objective evidence, which attributes part of the actual market success of the powered prestretch process of the '510 patent to the disclosures and claims of the dormant Thimon patent:

53. As disclosed in Thimon, the development of prestretch expanded the use of stretch wrapping to

new applications that could not previously be served by the existing wrapping machines due to the cost of the wrap or the nature of the product. The advantages of reducing the force on the load allowed stretch wrapping to become an effective form of packaging for products that damaged easily from application of force to the load. Some of the new markets for stretch wrapping included bath tissue, PET bottles and empty aluminum cans. Although Lantech claims these advantages as developed by the '510 patent, these are advantages of Thimon as embodied in the '510 patent.

(Pet. App. 22a, emphasis supplied). (See Conclusion of Law 31, Pet. App. 44a)

In its reference to "cost of the wrap," Finding 53 implies that the Thimon patent was addressed to the purpose of increasing film elongation so as to use less film and reduce film cost. This is in direct and irreconcilable conflict with its unchallenged Finding 47 and the unchallenged portion of its Conclusion 35 quoted above in the text at pp. 8-9.

5. The District Court's Obviousness Determination "Not-withstanding" The Objective Indicia Of Nonobviousness.

The net result of its conflicting findings is that the District Court answered a relevant fact question both "yes" and "no." It found both that there was (unchallenged Findings-96 and 97) and there was not (contested Finding 53) a causal nexus between the unique cost-saving benefits and merits of the invention of the '510 patent and the evidence of its commercial success and nonobviousness.

In the context of this impermissible conflict in its findings, the District Court ultimately reached its legal determination that the invention would have been obvious "[n]otwithstanding the existence of objective criteria of nonobviousness." (Conclusion 35, Pet. App. 45a) The District Court's sole stated reason for its obviousness ruling was that it saw "relatively slight differences between the '510 patent and the prior art." (Conclusion 35, Pet. App. 45a) Reviewing the Thimon patent, the '806 conventional stretch patent and one other conventional stretch prior art reference, the District Court accepted the "prestretch" + "reduced wrapping force" + "stretching over the yield point" formula for obviousness the examiner had considered and discarded. (Conclusion 35, Pet. App. 45a-46a)³

With study, the examiner had come to understand that despite the apparent ease of selecting and combining these "elements" in hindsight after the Lancasters' invention, the cited prior art as a whole would not have suggested the powered prestretch invention as a whole at the time the invention was made. He also knew of the burgeoning success by 1983 of the powered prestretch invention. Accordingly, in 1983 at the end of an extremely thorough three-and-one-half-year examination, the examiner had allowed the claims of the '510 patent, saying:

³The District Court failed to make the required finding stating how this prior art as a whole would have suggested the invention as a whole and would have suggested success in stretching film farther and reducing the cost of stretch wrapping. Diversitech Corp. v. Century Steps, Inc., 850 F. 2d 675, 679 (Fed. Cir. 1988); In re Wright, 848 F. 2d 1216, 1219-20 (Fed. Cir. 1988); In re Dow Chemical Co., 837 F. 2d 469, 473 (Fed. Cir. 1988). In violation of Fed. R. Civ. P. 52(a), the Federal Circuit purported to "affirm" this nonexistent finding and thus made a de novo appellate finding. Panduit Corp. v. Dennison Mfg. Co., 810 F. 2d 1561, 1565 (Fed. Cir.), cert. denied, 481 U.S. 1052 (1987), citing Icicle Seafoods, Inc. v. Worthington, 475 U.S. 709 (1986). If the Court grants certiorari, Lantech will urge that this is part and parcel of the erroneous application of the law by the District Court and the Federal Circuit on the obviousness/nonobviousness determination.

One of the reasons for allowance is the lack of showing in the prior art of pre-stretching a film web in a wrapping operation substantially past the yield point and then reducing the forces on the web. Commercial success was also a consideration in the allowance of the claims.

(E 980)

After a two-week bench trial, the District Court declared the '510 patent invalid for obviousness of the invention under 35 U.S.C. § 103 (Pet. App. 17a-23a, 39a-46a) and unenforceable for inequitable conduct because of "gross negligence" during the prosecution of the patent application (Pet. App. 24a-28a, 46a-51a). Consistent with Federal Circuit directions (see pp. 19-20 below), the District Court also resolved the infringement issue, determining that Kaufman had infringed, induced infringement of and contributorily infringed the '510 patent under 35 U.S.C. § 271(a), (b) and (c). (Pet. App. 28a-36a, 51a-60a)

6. The Federal Circuit Panel Majority's Affirmance Ignoring The Conflict In The Findings.

On Lantech's appeal, the Federal Circuit affirmed the conclusion of obviousness by a 2-1 vote. Addressing Lantech's argument that the District Court had undervalued or improperly ignored the objective indicia of nonobviousness it had found, the Court of Appeals relied upon contested Finding 53 which attributed the commercial success to the teaching of the Thimon patent. (Pet. App. 3a-4a) (See pp. 9-10 above) In contrast, the court of Appeals completely ignored the strong uncontested objective evidence findings, both in the obviousness and infringement sections, which established the causal nexus beyond dispute and supported a conclusion of nonobviousness. (See pp. 6-9

above) Therefore, without even acknowledging the conflict existed, the Court of Appeals concluded:

In sum, the court's findings do not specifically suggest that the '510 process enhanced the commercial success of Lantech's machine.

(Pet. App. 4a) To the contrary, findings 57, 95 and 96 state very specifically that the unique cost-saving benefits of the '510 process caused the commercial success of both Lantech's and Kaufman's powered prestretch machines.

The panel majority of the Federal Circuit did not reach the inequitable conduct determination, from which Lantech had also appealed.⁴ Kaufman pursued an unsuccessful cross-appeal seeking attorney fees (Pet. App. 5a). Kaufman did not cross-appeal from the infringement holding, so it was *not* subject to appellate review.

7. Judge Bissell's Dissent-In-Part Explaining Why The Undisputed Objective Indicia Of Nonobviousness Should Have Compelled A Holding Of Nonobviousness.

Judge Bissell, who later said she would have granted rehearing (Pet. App. 68a), wrote a dissent-in-part-in which she explained why the judgment should be reversed as to invalidity. (Pet. App. 6a-7a) Without specifically delineating the unresolved conflict in the findings, Judge

If the Federal Circuit considers the inequitable conduct issue, the District Court's conclusion will not stand. Judge Bissell would have reversed on this issue (Pet. App. 7a), because an intervening in banc decision by the Federal Circuit forbids an inequitable conduct determination based solely, as in this case (Conclusions 49 and 56, Pet. App. 49a, 51a), upon a finding of gross negligence in dealing with the Patent Office. Kingsdown Medical Consultants, Ltd. v. Hollister, Inc., 863 F. 2d 867, 876 (Fed. Cir. 1988) (in banc) ("gross negligence" does not of itself justify an inference of intent to deceive"), cert. denied, 109 S. Ct. 2068 (1989).

Bissell focused on the proper resolution of the very issues raised in this petition:

The district court found that Lantech's '510 power prestretch wrapping process was highly successful, but concluded that much of the commercial success was attributable to the Thimon prior art process, not the '510 process. There is no evidence that Lantech's commercial success resulted from what the prior art disclosed. To the contrary, all the evidence points to the '510 process as the reason for Lantech's significant success. Meaningful film usage reductions and cost savings are achieved only by stretching films over their yield point.

Additionally, the district court found significant objective evidence of long felt need, competitors' disbelief followed by copying, and licensing. In my view, the district court erred by discounting its findings of commercial success and other objective evidence of nonobviousness because of "relatively slight differences" between the '510 patent and the prior art. See Datascope Corp. v. SMEC, Inc., 776 F. 2d 320, 324, 227 USPQ 838, 841 (Fed. Cir. 1985) (instructing that it is error to focus solely on the differences between the claimed invention and the prior art because slight differences may be the key to success).

(Pet. App. 6a-7a)

REASONS FOR GRANTING THE WRIT

I. Certiorari Is Necessary To Require The Court Of Appeals To Comply With Fundamental Procedures Under Fed. R. Civ. P. 52(a) For Resolving The Conflict In The Findings Of Fact And To Allow This Court To Provide Needed Guidance On The Application Of Rules Of Finality And Preclusion Within A Single Case.

The Federal Circuit violated Fed. R. Civ. P. 52(a) by affirming the judgment without first resolving a direct con-

flict between critical findings of fact. The Federal Circuit violated principles of finality by affirming the judgment based upon challenged District Court findings which conflict with binding, preclusive findings from another unappealed portion of the District Court's judgment. The Court should exercise its supervisory responsibility to instruct the courts of appeals in the proper conduct of these matters which are central to the appropriate scope of appellate review.

A. Conflicts In Material Findings Of Fact Must Be Resolved Before The Court Of Appeals May Decide Issues Presented On Appeal.

In this case, the Court of Appeals chose one option never available to an appellate court—it affirmed the judgment while completely ignoring a material conflict in the District Court's findings of fact. Whenever conflicting findings are made by a district court, the conflict must be specifically addressed and resolved either by the district court or by the court of appeals before the court of appeals may make a final determination of the legal appropriateness of the district court's judgment.

If there is no basis for the court of appeals to eliminate one of two conflicting findings by holding it clearly erroneous under Fed. R. Civ. P. 52(a), the judgment should be vacated and the case remanded to the district court for resolution of the conflict.⁵ In the presence of conflicting

⁵See e.g., State Industries, Inc. v. Mor-Flo Industries, Inc., 883 F. 2d 1573, 1581-82 (Fed. Cir. 1989) (judgment vacated based upon unresolved conflicting findings and case remanded to district court for reconsideration); Jones v. Jones Bros. Construction Corp., 879 F. 2d 295, 298-99 (7th Cir. 1989) (case remanded for further findings and clarification where trial court made incompatible find(Continued on next page.)

relevant findings, a judgment may be affirmed without remand for resolution of the conflict only if a challenged finding has been held clearly erroneous and the contrary finding is not clearly erroneous and will support the judgment. Those are not the circumstances of this case. The Court of Appeals did not declare either of the conflicting findings to be clearly erroneous. It did not even acknowledge the existence of the conflict.

The Federal Circuit is bound to follow the law of the host circuit, in this case the Sixth Circuit, regarding matters not unique to the patent law. See Atari, Inc. v. JS&A Group, Inc., 747 F. 2d 1422, 1439 (Fed. Cir. 1984). Nevertheless, by affirming the judgment while ignoring the conflict between material findings of fact, the Federal Circuit acted contrary to the established law and procedures of the Sixth Circuit and other circuits, as well as its own. (See n. 5 above).

Even if one of the two conflicting sets of findings had not been binding and had not compelled reversal as explained in part B, the Court of Appeals could not have affirmed as it did without first providing for resolution of the conflict between the findings of "causal nexus" and

⁽Continued from preceding page.)

ings); Farber v. Servan Land Co., 541 F. 2d 1086, 1088 (5th Cir. 1976) (case remanded for resolution of inconsistency in findings: "The doubt, and the inconsistency which create the doubt, should be resolved by the district court."); Boston Fish Market Corp. v. Universal Ins. Co., 388 F. 2d 773, 776-77 (1st Cir. 1968) (judgment vacated and case remanded where district court made either inconsistent or inadequate findings); Rubino v. Commissioner, 226 F. 2d 291, 296 (6th Cir. 1955) (case remanded for recomputation of tax deficiencies because of conflict in findings relating to opening net worth, on which entire computation depended).

"no causal nexus." The Court should grant certiorari and reverse the obviousness determination for this reason alone.

B. When One Of Two Sets Of Conflicting Findings Is Final And Preclusive, That Set Must Prevail On Appeal And The Decision Of The Court Of Appeals Must Conform To Those Findings.

The District Court made a "no causal nexus" finding arguably supporting its obviousness determination, but both that finding and the determination were contested on appeal. In contrast, the District Court's directly conflicting causal nexus findings were unappealed and unreviewable and, therefore, final and binding. In this circumstance, the challenged "no causal nexus" finding should have been declared clearly erroneous.

Given that state of the proceedings, the Federal Circuit would surely have reversed the obviousness determination as not supported by the remaining findings, including those establishing the "causal nexus." See, e.g., Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F. 2d 1367, 1382 (Fed. Cir. 1986) (district court had inconsistently found "nexus" and "lack of nexus" between merits of invention and objective evidence and had held patent invalid for

⁶Smith International, Inc. v. Hughes Tool Co., 718 F. 2d 1573, 1580 (Fed. Cir.) (infringement findings not appealed; trial court's adjudication of infringement final and conclusive when court of appeals reverses holding of invalidity), cert. denied, 464 U.S. 996 (1983). See F. W. Hempel & Co. v. Metal World, Inc., 721 F. 2d 610, 611 n. 1 (7th Cir. 1983) (appellate court, reiterating district court finding, stated: "Since neither party has challenged this finding, it will stand."); Osborne v. Sinclair Refining Co., 286 F. 2d 832, 834 (4th Cir. 1960) ("In its opinion, the district court set out in detail the facts of the case, and, as those findings were not contested on this appeal, we are concerned only with the legal conclusions to be drawn from them."), cert. denied, 366 U.S. 963 (1961).

obviousness; Federal Circuit decided "lack of nexus" findings were clearly erroneous and reversed), cert. denied, 480 U.S. 947 (1987); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F. 2d 281, 299 (Fed. Cir. 1985) (findings were in direct conflict; Federal Circuit reversed without remand, holding that the finding that supported the obviousness determination was clearly erroneous), cert. denied, 475 U.S. 1017 (1986).

When two claims or issues in the same action are tried separately, unappealed findings of fact necessary to the judgment on the claim or issue adjudicated first are binding on the parties and the court in a subsequent trial on the second claim or issue. Partmar Corp. v. Paramount Pictures Theatres Corp., 347 U.S. 89, 98-101 and n.6 (1954). See Smith International, 718 F. 2d 1573; Richardson v. Communications Workers, 486 F. 2d 801, 804 (8th Cir. 1973). Thus, when a district court has found necessary facts and they have remained unchallenged during an appeal, the district court must conform any later factual and legal determinations in the same case to those facts it earlier found.

A court of appeals should likewise be bound by the district court's unappealed findings of fact when it considers the portions of a judgment which have been challenged on appeal. In this case the Supreme Court now has a compelling opportunity to supervise the courts of appeals

⁷Remand for further consideration of the obviousness defense would have been unnecessary because "the burden of proving those necessary-facts [was] on appellee" patent challenger. Panduit Corp. v. Dennison Mfg. Co., 810 F. 2d 1561, 1565-66 (Fed. Cir.) (Federal Circuit was "compelled" to reverse without remand where one set of unchallenged findings required a conclusion of nonobviousness, and a second set of findings were unable to support the trial court's conclusion of obviousness), cert. denied, 481 U.S. 1052 (1987) ("Panduit II").

in the application of these same rules of finality and preclusion when necessary facts found in an *unappealed* portion of a judgment are relevant to the *appealed* portion of the same judgment.

This same-case, same-appeal preclusion issue may arise in any type of case and any time a portion of a district court's judgment remains unappealed. While the issue may thus confront any court of appeals, it will frequently occur in patent cases before the Federal Circuit.

The Federal Circuit has directed that, when patent infringement and validity issues are tried together, the trial court should decide both, even if the trial court determines that the patent is invalid. Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 1540 (Fed. Cir. 1983).8

There are two articulated reasons for this directive. One is judicial economy. *Id.* at 1540-41.9 Second, and most important here, the facts relating to infringement may be objective evidence of nonobviousness. For example, the very act of copying is objective evidence of nonobviousness. Id. at 1541.¹⁰ This case clearly illustrates how the facts of

^{*}See also Lindemann Maschinenfabrik v. American Hoist and Derrick Co., 730 F. 2d 1452, 1463-64 (Fed. Cir. 1984); Simmons Fastener Corp. v. Illinois Tool Works, Inc., 739 F. 2d 1573, 1576 (Fed. Cir. 1984), cert. denied, 471 U.S. 1065 (1985).

⁹For example, Lantech, the losing litigant at trial, appealed the District Court's determination that the '510 patent was invalid and unenforceable. Kaufman took the risk that Lantech would prevail in the Federal Circuit, and chose not to cross-appeal from the infringement determination. Had Lantech prevailed on appeal, judgment would have been entered against Kaufman without further inquiry into the infringement issue. See, e.g., Smith International, 718 F. 2d at 1580.

 ¹º See Diversitech Corp. v. Century Steps, Inc., 850 F. 2d 675,
 679 (Fed. Cir. 1988) ("Copying is an indicum of nonobviousness,
 (Continued on next page.)

infringement should influence a district court's obviousness determination. Findings 96 and 97, made in the context of the infringement determination, explain in detail the direct causal nexus between the benefits of the powered prestretch process of the '510 patent and the uncontested objective evidence showing that the invention would have been nonobvious.

The District Court understood that it should make both the obviousness and infringement determinations. (Pet. App. 51a) Nevertheless, the conflict in its findings shows that the District Court made the obviousness determination completely independently of its own infringement findings which are relevant to the obviousness issue.

The strong causal nexus findings in the infringement determination became final when Kaufman chose not to challenge them. The principles of finality required the Federal Circuit to review the obviousness/nonobviousness decision in light of those binding nexus findings, but the Federal Circuit failed even to acknowledge their existence. In contrast, Judge Bissell would have reversed because she was correctly focused on the content of the relevant, binding nexus findings 96 and 97 from the unappealed infringement portion of the District Court decision. (Pet. App. 6a-7a)

The Court should grant certiorari and reverse the decision of the Court of Appeals on the obviousness issue be-

⁽Continued from preceding page.)

and is to be given proper weight.") (citing Windsurfing International, Inc. v. AMF, Inc., 782 F. 2d 995, 1000 (Fed. Cir.), cert. denied, 477 U.S. 905 (1986)); Jones v. Hardy, 727 F. 2d 1524, 1531 (Fed. Cir. 1984) ("Hardy's admitted infringement constitutes some evidence of the merits of the claimed invention over the prior art praised but avoided by Hardy.")

cause it does not conform to the District Court's final, preclusive and binding findings establishing the causal nexus between the merits and benefits of the invention and the objective indicia of nonobviousness.

II. The Court Of Appeals' Decision Conflicts With The Decision Of This Court In Graham v. John Deere Co., 383 U.S. 1 (1966), And Creates Confusion In A Central Area Of The Patent Law By Arbitrarily Failing To Credit Undisputed Objective Evidence Of Nonobviousness Under 35 U.S.C. § 103.

This Court has recognized that objective indicia of non-obviousness of an invention such as commercial success, long-felt but unresolved need, failure of others and copying, properly "focus attention on economic and motivational rather than technical issues and are, therefore, more susceptible of judicial treatment than are the highly technical facts often present in patent litigation." Graham v. John Deere Co., 383 U.S. 1, 17, 36 (1966).

As the Federal Circuit itself has explained, objective evidence "can be the most probative evidence of nonobviousness in the record, and enables the district court to avert the trap of [using] hindsight" to reconstruct an invention from the prior art. Custom Accessories, Inc. v. Jeffrey-Allan Industries, Inc., 807 F. 2d 955, 960 (Fed. Cir. 1986). There are cases in which the "human, real world story" of an invention "not only reflects the inadequacy of the prior art, but compels a conclusion of nonobviousness of the claimed inventions in suit." (Emphasis supplied.) Panduit Corp. v. Dennison Mfg. Co., 774 F. 2d 1082, 1099 (Fed. Cir. 1985), vacated on other grounds and remanded, 475 U.S. 809 (1986) ("Panduit I").

Objective evidence of nonobviousness is central to the constitutional purpose of the patent laws. U.S. Const. art.

I, § 8, cl. 8. "The constitutional purpose is to encourage disclosure of patentable contributions to 'progress in the useful arts', all useful arts, not just the esoteric. The statute requires utility, novelty and nonobviousness, not complexity." Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1572 (Fed. Cir.), cert. denied, 481 U.S. 1052 (1987) ("Panduit II").

The District Court's findings 96 and 97 establish the tight causal "nexus" between the merits of the '510 patent and the objective evidence of nonobviousness as reflected in findings 51-52 and 54-60.

The term "nexus" is often used, in this context, to designate a legally and factually sufficient connection between the proven success and the patented invention, such that the objective evidence should be considered in the determination of nonobviousness.

Demaco Corp. v. F. von Langsdorff Licensing Ltd., 851 F.2d 1387, 1392 (Fed. Cir.), cert. denied, 109 S. Ct. 395 (1988).

The preclusive, binding nexus findings in this case show, as Judge Bissell recognized (Pet. App. 6a-7a), that the '510 patent covers one of those extremely useful and successful inventions deserving of patent protection regardless of how small the differences from the prior art may now seem.

The "difference" may have seemed slight (as has often been the case with some of history's great inventions, e.g., the telephone), but it may also have been the key to success and advancement in the art resulting from the invention.

Jones v. Hardy, 727 F.2d 1524, 1528 (Fed. Cir. 1984). For example, a mere change in the elevation of one end of a

moving screen in a preexisting machine was held to be a patentable invention in large part because this seemingly small difference in the art produced a significant commercial result—a 20% faster process for making newsprint. Eibel Process Co. v. Minnesota & Ontario Paper Co., 261 U.S. 45, 53-56 (1923). The "difference" in the stretch wrapping art reflected by the invention of the '510 patent may have seemed slight to the District Court in 1987 and to the Federal Circuit in 1989. Nevertheless, the District Court's forgotten findings show that in 1979, stretching film over its yield point was the key to cutting the cost of stretch wrapping by 50%.

In this context, the Federal Circuit panel majority opinion represents a stunning about-face from the previously well-settled law, at least after *Graham*, that it will be reversible error when a district court has "disregarded the controlling impact of its own unchallenged findings on the objective rebuttal evidence of nonobviousness." *Panduit II*, 810 F.2d at 1570.

A Congressional purpose in creating the Federal Circuit in 1982 and granting it "virtually exclusive appellate jurisdiction over patent cases" was "to obtain greater uniformity in the development and application of patent law." 3 D. Chisum, *Patents* § 11.06[3][e] at 11-106.1-106.2 (1982); see H.R. Rep. No. 312, 97th Cong., 1st Sess. (1981); S. Rep. No. 275, 97th Cong., 1st Sess. (1981). "The law must be the same for all patents and types of inventions. A level playing ground for the marketplace of ideas is as necessary for technological innovation as it is for politics and social policy." *Panduit II*, 810 F. 2d at 1573-74.

Instead, the Court of Appeals' decision in this case signals a retreat to pre-1982 unpredictability in the considera-

tion of the nonobviousness requirement of 35 U.S.C. § 103. For example, the Federal Circuit justified its disregard of the undisputed objective indicia of nonobviousness by saying:

Moreover, commerical success "cannot by itself establish nonobviousness" (emphasis in original), Lindemann Maschinenfabrik GmbH, 730 F.2d at 1461, 221 USPQ at 488.

(Pet. App. 4a) This partial quote is actually Chief Judge Markey's very description of the reasoning rejected in Lindemann just five years ago! Lindemann Maschinenfabrik GmbH v. American Hoist and Derrick Co., 730 F. 2d 1452, 1461 (Fed. Cir. 1984). The Federal Circuit specifically rejected the quoted language as any part of the obviousness test and said it reflected the reversible error of considering objective evidence, if at all, only after reaching a conclusion of obviousness based upon the art comparison alone. Id.

To the contrary, the Federal Circuit has consistently held, until now, that objective evidence of nonobviousness "may often establish that an invention appearing to have been obvious in light of the prior art was not." Stratoflex, Inc. v. Aeroquip Corp., 713 F. 2d at 1530, 1538 (Fed. Cir. 1983) (holding of obviousness affirmed because requisite nexus was not shown). See Alco Standard Corp. v. Tennessee Valley Authority, 808 F. 2d 1490, 1499-1501 (Fed. Cir. 1986), cert. dismissed, 483 U.S. 1052 (1987) (quoting Stratoflex and affirming holding of nonobviousness where nexus was shown).

Except for the conflicting findings, the circumstances and proceedings in this case are indistinguishable from those in *Simmons Fastener Corp.* v. *Illinois Tool Works*, *Inc.*, 739 F. 2d 1573 (Fed. Cir. 1984), rev'g 560 F. Supp.

1277 (N.D. N.Y. 1983), cert. denied, 471 U.S. 1065 (1985). After finding objective indicia of nonobviousness and the required nexus, the District Court in Simmons held an invention would have been obvious, following precisely the same reasoning used by the District Court in this case. 560 F. Supp. at 1288-92. The Federal Circuit reversed the determination of invalidity for obviousness, saving:

The requisite nexus was found by the trial court. . . .

We agree with the trial court that the teachings of the prior are [sic, art] prima facie would have suggested to one of ordinary skill in the art the claimed invention. . . . However, the evidence of secondary considerations in this case, particularly commercial success, is extremely strong, and is entitled to great weight.

739 F. 2d at 1575-76. See, e.g., Demaco, 851 F. 2d at 1391-94 (explaining "evidentiary routine" and role of objective evidence connected to the invention by a causal nexus); Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F. 2d 1367, 1382 (Fed. Cir. 1986) (conflicting "nexus" and "no nexus" findings; invalidity determination reversed because "no nexus" findings were clearly erroneous), cert. denied, 480 U.S. 947 (1987).

Reading Simmons, Demaco, Hybritech, Panduit II and Alco Standard on one hand and the decision in this case on the other, there is no way for the Patent Office, patentees, patent challengers or District Courts to predict how the Federal Circuit will rule on matters involving undisputed objective indicia of nonobviousness with a causal link to the merits of the invention. The predictability sought by the Court in deciding Graham and by Congress in enacting 35 U.S.C. § 103 and in establishing the Federal Circuit is not in sight.

"[T]he nonobviousness requirement [is] the most frequently litigated issue of patentability." 3 D. Chisum, Patents § 11.06[3][c], at 11-102 (1988). When the Federal Circuit declined Lantech's suggestion for rehearing in banc (Pet. App. 69a), it signaled that it is not prepared to alleviate the uncertainty which its conflicting decisions have fostered in this key area. On one occasion this Court granted certiorari in large part because of "conflicting views within the [Second Circuit]" on fraudulent bankruptcies which "probably present more difficulties to the courts in the Second Circuit than they do elsewhere." Maggio v. Zeitz, 333 U.S. 56, 59-60 (1948).

With the Federal Circuit hearing nearly all patent appeals, the same rationale should apply in this case. This is an intracircuit breakdown on an economic issue of national importance—the continuation of constitutionally mandated, uniform patent protection for society's most useful inventions. The Federal Circuit's vacillation in giving effect to proven objective evidence of the nonobviousness of extremely successful inventions is the equivalent of an intercircuit conflict demanding the attention of this Court.

¹¹The designation of the majority and dissenting opinions in this case as "unpublished" and not citable as precedent (Pet. App. 1a, 6a) does not lessen the unpredictability in the application of the patent law which this decision evidences and has generated. This very decision has been commented upon as an example of unpublished opinions which are a "major source of information about the [Federal Circuit], and the various Circuit Judges' views on patent and trademark law." (Pet. App. 70a-71a) In fact, the informal, "unpublished" nature of the decision helps create more confusion because the Federal Circuit has not explained its analysis even though it is at variance with earlier "published" decisions.

CONCLUSION

This petition for certiorari should be granted because the Court of Appeals reached the wrong result on an important economic issue and because it employed impermissible methods of jurisprudence. The Federal Circuit has declined its mandate to develop the core of the patent law in a uniform, predictable fashion. Because the Court of Appeals so clearly failed to resolve a conflict in relevant findings before ruling on the legal issue, summary reversal is appropriate.

Respectfully submitted,

John S. Reed Counsel of Record

JOHN E. SELENT
MICHAEL A. VALENTI
MARY R. HARVILLE
HIRN REED HARPER & EISINGER
2450 Meidinger Tower
Louisville, KY 40202
(502) 585-2450
Counsel for Petitioner

November 30, 1989



APPENDIX



Note: This opinion has not been prepared for publication in a printed volume because it does not add significantly to the body of law and is not of widespread legal interest. It is a public record. It is not citable as precedent. The decision will appear in tables published periodically.

UNITED STATES COURT OF APPEALS

FOR THE FEDERAL CIRCUIT

88-1541, -1551

LANTECH, INC., - - - Plaintiff-Appellant,

v.

Kaufman Company of Ohio, Inc., - Defendant/ Cross-Appellant.

DECIDED: June 16, 1989

Before Bissell and Archer, Circuit Judges, and Re, Chief Judge.* Archer, Circuit Judge.

DECISION

Lantech, Inc. (Lantech) appeals the judgment of the United States District Court for the Northern District of Ohio, Case No. C85-7190, that U.S. Patent No. 4,418,510 ('510) is invalid and unenforceable. Kaufman Company of Ohio (Kaufman) cross-appeals challenging the court's failure to award it attorney fees under 35 U.S.C. § 285 (1982). We affirm.

^{*}The Honorable Edward D. Re, Chief Judge, United States Court of International Trade, sitting by designation.

OPINION

I.

Lantech contends that the prior art on which the district court based its invalidity holding would not have suggested to one skilled in the art the process claimed in the '510 patent. Lantech also argues that the court failed to give proper weight in its 35 U.S.C. § 103 (1982) analysis to the commercial success of Lantech's powered prestretch machine.

A. Before making its obviousness determination, the district court fully analyzed the prior art. The court found that the Thimon patent discloses "a process for wrapping a load in stretchable plastic film characterized by stretching the film befor applying the film to the load" and that the "force on the load was substantially below the force required for stretching the film." The '806 patent, according to the court's findings, discloses a stretch wrap pro s wherein the film is stretched "between 2% and 100% while the yield points of most films were . . . between 15% and 40%." And finally, the court found that the "Snakesheet" newsletter published by a competitor discusses and discloses "new found" strength that may be obtained by stretching wrapping film beyond its yield point.

After discussing the references, the district court set forth its reasons for concluding that the invention would have been obvious from the combination of the cited prior art, as follows:

The applicants' [sic patentees'] invention was the Thimon invention of prestretching with a reduction in force on the load. However, the '510 patent had the added improvement over Thimon of stretching film beyond the yield point. The '806 patent and the Snake-

sheet disclosed the advantages and suggested the desirability of stretching film over the yield point.

We are unpersuaded that the court was clearly erroneous in its analysis of the references. Further, we perceive no error in the district court's conclusion that the teachings of these references would have motivated, or suggested to, the skilled artisan to increase the elongation force applied to the wrapping film in the Thimon method. See Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F. 2d 1452, 1462, 221 USPQ 481, 488 (Fed. Cir. 1984); see also Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F. 2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988).

Lantech argues that the district court's conclusion is erroneous because the prior art fails to indicate the economic advantage disclosed in the '510 patent which is gained from the use of highly stretched films. The recitation of an additional advantage associated with doing what the prior art suggests does not lend patentability to an otherwise unpatentable invention. Application of Kronig, 539 F. 2d 1300, 1304, 190 USPQ 425, 427-38 (CCPA 1976) (rejection not "deficient merely because appellants allege a different advantage resulting from the addition of water . . . it is sufficient here that Yasui et al. clearly suggest doing what appellants have done, viz., adding water"). See also In re Heck, 699 F. 2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983); In re Lintner, 458 F. 2d 1013, 1016, 173 USPQ 510, 652-63 (CCPA 1972).

B. Lantech's arguments concerning the commercial success of its powered prestretch machine do not establish that the district court's conclusion of obviousness was wrong. Although the court found that the Lantech machine had attained significant commercial success, it concluded that the success "cannot be totally attributed to the '510 patent." Bearing on that conclusion, the court said the

patentee's invention was the "Thimon invention" with the added improvement of "stretching film over the yield point" and that there were "relatively slight differences between the '510 patent and the prior art." The court noted that the greatly expaned overall stretch-wrapping market was attributable to the advantages disclosed in Thimon that were embodied in the patented process. It also made a point of the fact that Lantech's apparatus claims drawn to its machine were rejected for anticipation by Thimon and cancelled. In sum, the court's findings do not specifically suggest that the '510 process enhanced the commercial success of Lantech's machine.

It is apparent that the district court fully considered commercial success as required by Stratoflex, Inc. v. Aeroquip Corp., 713 F. 2d 1530, 1538, 218 USPQ 871, 879 (Fed. Cir. 1983), yet it discounted the impact of the patented process on the commercial success of the machine. See Pentec, Inc. v. Graphic Controls Corp., 776 F. 2d 309, 315, 227 USPQ 766, 770 (Fed. Cir. 1985). Moreover, commercial success "cannot by itself establish nonobviousness" (emphasis in original), Lindemann Machinenfabrick GMBH. 730 F. 2d at 1461, 221 USPQ at 488. On the record before us, we are not persuaded that the court's findings regarding Lantech's commercial success were clearly erroneous or that it reached an erroneous conclusion of law in holding the '510 patent invalid under 35 U.S.C. § 103. Polaroid Corp. v. Eastman Kodak Co., 789 F. 2d 1556, 1558, 229 USPQ 561, 563 (Fed. Cir.), cert. denied, 107 S. Ct. 178 (1986).

C. Because we affirm the district court's invalidity determination, we do not address Lantech's appeal of the district court's conclusion that the '510 patent was also unenforceable.

II.

In claiming that it should have been awarded attorney fees under 35 U.S.C. § 285, Kaufman argues that the court erred by failing to find Lantech's misrepresentation before the U.S. Patent and Trademark Office (PTO) intentional rather than "at least grossly negligent." As the opinion makes clear, the trial judge was fully cognizant of all the facts associated with Lantech's conduct before the PTO. In the face of such facts, the court nonetheless declined to characterize Lantech's conduct as intentional or to find the case exceptional. Based on the quantum of proof required of Kaufman to prove an exceptional case, see Reactive Metals Alloys Corp. v. ESM, Inc., 769 F. 2d 1578, 1582, 226 USPQ 821, 824 (Fed. Cir. 1985), we are not convinced that the district court erred. Moreover, even if the district court had found this case to present exceptional circumstances, section 285 does not mandate that attorney fees be awarded. That determination is a discretionary matter for the trial court. Id. See also Rohm & Haas Co. v. Crystal Chem. Co., 736 F. 2d 688, 222 USPQ 97 (Fed. Cir. 1984).

Accordingly, we affirm the decision of the district court.

Note: This opinion has not been prepared for publication in a printed volume because it does not add significantly to the body of law and is not of widespread legal interest. It is a public record. It is not citable as precedent. The decision will appear in tables published periodically.

UNITED STATES COURT OF APPEALS

FOR THE FEDERAL CIRCUIT

88-1541, -1551

Lantech, Inc., - - - Plaintiff-Appellant,

v.

Kaufman Company of Ohio, Inc., - Defendant/ Cross-Appellant.

Bissell, Circuit Judge, dissenting in part.

I dissent from part I of the majority's opinion because I would reverse the district court's decision holding invalid and unenforceable United States Patent No. 4,418,510 ('510). The district court found that Lantech's '510 power prestretch wrapping process was highly successful, but concluded that much of the commercial success was attributable to the Thimon prior art process, not the '510 process. There is no evidence that Lantech's commercial success resulted from what the prior art disclosed. To the contrary, all the evidence points to the '510 process as the reason for Lantech's significant success. Meaningful film usage reductions and cost savings are achieved only by stretching films over their yield point.

Additionally, the district court found significant objective evidence of long felt need, competitor's disbelief followed by copying, and licensing. In my view, the district court erred by discounting its findings of commercial success and other objective evidence of nonobviousness because

of "relatively slight differences" between the '510 patent and the prior art. See Datascope Corp. v. SMEC, Inc., 776 F. 2d 320, 324, 227 USPQ 838, 841 (Fed. Cir. 1985) (instructing that it is error to focus solely on the differences between the claimed invention and the prior are because slight differences may be the key to success).

The district court abused its discretion in holding the '510 patent unenforceable for inequitable conduct because a finding of gross negligence, without more, is not sufficient to support that holding. See Kingsdown Medical Consultants, Ltd. v. Hollister Inc., 863 F. 2d 867, 876, 9 USPQ2d 1384, 1392 (Fed. Cir. 1988) (in banc) (stating that "'gross negligence' does not of itself justify an inference of intent to deceive"). Finally, I would affirm the court's infringement findings.

IN THE

UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF OHIO WESTERN DIVISION

Case No. C 85-7190

Lantech, Inc., - - - - - - Plaintiff

v.

Kaufman Company of Ohio, - - - Defendant

FINDINGS OF FACT AND CONCLUSIONS OF LAW

POTTER, J.:

This matter came on for trial to the Court on March 24, 1987 and ended April 6, 1987. This is an action for infringement of United States Patent No. 4,418,510 ('510 patent) brought by Lantech, Inc. (Lantech) against Kaufman Company of Ohio (Kaufman). Kaufman counterclaimed against Lantech, alleging a violation of Section 2 of the Sherman Act, 15 U. S. C. \\$2, in the procurement and enforcement of the '510 patent. Kaufman also asserts that the patent is invalid, that the patent is unenforceable because of inequitable conduct by the applicant before the Patent and Trademark Office (PTO) and that the patent is not infringed by any of Kaufman's products or actions.

Upon the agreement of the parties, the Court stayed Kaufman's antitrust claim and Lantech's request for an accounting of patent damages, costs, fees and interest until disposition of the underlying patent claim by this Court.

Therefore, the parties agreed that the only issues presented for disposition by this Court are:

- 1. the validity of the '510 patent under 35 U. S. C. §§101, 102, 103 and 112;
- 2. the enforceability of the '510 patent in light of Kaufman's allegations of inequitable conduct contained in its answer and as set forth in Kaufman's pretrial brief and, if proven, Kaufman's entitlement to relief including courts costs and attorney's fees as a result of Lantech's inequitable conduct;
- 3. the infringement and willful infringement of the '510 patent;
- 4. Lantech's entitlement, upon a determination of validity, enforceability and infringement, to an injuction, 35 U.S.C. §283; damages and enhanced damages, 37 U.S.C. §284; prejudgment interests, and attorney's fees, 35 U.S.C. §285.

Pursuant to Court order, the parties filed pre-trial briefs, post-trial briefs, proposed findings of fact and conclusions of law and reply briefs. The Court has considered the briefs of counsel, the proposed findings of fact and conclusions of law, and the evidence, and now makes its independent findings of fact and conclusions of law.

FINDINGS OF FACT

I. The Parties and Background

- 1. Lantech is a corporation organized and existing under the laws of the Commonwealth of Kentucky, having its principal place of business at 11000 Bluegrass Parkway, Louisville, Kentucky, 40299.
- 2. Kaufman is a corporation organized and existing under the laws of the State of Ohio, having its principal place of business at 4455 South Avenue, Toledo, Ohio, 43614, in this judicial district. For all purposes and superseding the pleadings, defendant also includes the Kaufman

Company of South Carolina, a corporation organized and existing under the laws of South Carolina, having its principal place of business at 55 South Burty Road, Greenville, South Carolina, 29605, and related to Kaufman Company of Ohio.

- 3. Both Lantech and Kaufman are in the business of manufacturing and selling stretch wrapping machines from their respective plants in Louisville, Kentucky; Toledo, Ohio and Greenville, South Carolina.
- 4. Stretch wrapping is the process of unitizing a load by stretching film and applying a plurality of layers of stretched film around the load.
- 5. Lantech was formed in 1971 by Patrick R. and William G. Lancaster. In 1973, it developed, manufactured and marketed its first conventional pallet stretch wrapping machine. Lantech's first conventional stretch wrapping patent issued February 25, 1975 as United States Patent No. 3,867,806 ('806 patent).
- 6. Lantech is the owner of numerous United States and foreign patents on inventions in the strech wrapping industry.
- II. The Prosecution of the Application of the Patent in Suit
- 7. After research and development, Lantech conceived and reduced to practice the powered prestretch devices and methods in June, 1979.
- 8. The '510 patent issued from Application No. 255,222 (Continuation Application) filed April 17, 1981 which was a continuation of Application No. 74,786 (Parent Application) filed by the Lancaster brothers on September 12, 1979.
- 9. The Parent Application contained seventy-eight claims, forty-seven process claims and thirty-one apparatus claims.

- 10. The examiner rejected all seventy-eight claims. The rejection was based on indefiniteness and undue multiplicity under 35 U. S. C. §112, anticipation of several of the claims in light of the teaching of a French Patent No. 2,281, 275 to Thimon (Thimon patent) under 35 U. S. C. §102; and for the obviousness of several of the claims in light of Thimon alone and when combined with other references under 35 U. S. C. §103.
- 11. Following the first office action, Pat Lancaster and his patent attorney had an interview with the examiner on August 14, 1980. In his interview summary record, the examiner noted that the Thimon patent was the prior art discussed and commented that "applicant described the characteristic [sic] of the stretch film when stretched to below and above its yield point and the relationship of the wrapping process to these characteristics. Furthermore, the prior art doesn't show the stretching past the yield point and the results of such a wrapping operation." Joint Exhibit 90, paper 7 at 80.
- 12. On October 14, 1980, the applicants filed the first amendment. The amendment added a new claim number 79 and cancelled forty-eight claims. In the remarks accompanying the amendment, the applicant asserted that the Thimon patent did not teach stretching film above the yield point and that the Thimon patent taught away from the claims described in the pending application. Joint Exhibit 90, paper 8 at 81-91
- 13. The applicants also asserted that the Thimon reference had "no teaching of reducing the force on the portion of the film web between the downstream powered rollers and the load with inelastic strain recovery as a technique for reducing the wrapping force while holding high levels of elongation." Joint Exhibit 90, paper 8 at 87.
- 14. The examiner made a final rejection of all of the remaining claims in the Parent Application on December 2,

1980. He dropped the anticipation rejection based on the Thimon patent and the obviousness rejection based upon the Thimon patent alone. However, he added to his reasons for rejection under 35 U.S.C. §103 several other prior art references in combination with Thimon. The most significant of the prior art references was the '806 patent. The examiner contended that the '806 patent discloses and claims the stretching of film 2% to 100% while, according to the applicants, the yield points of most films were between 15% and 40% elongation. The examiner stated that "[t]he patent to Thimon sets forth a method of stretch wrapping a load by passing the wrapping film through a prestretching mechanism that consists of two roller assemblies that feed the material at different speeds. . . . To stretch the material of Thimon [sic] to substantially above the yield point as shown by Lancaster would be obvious." Joint Exhibit 90, paper 12 at 352.

15. On December 17, 1980, Lancaster and his patent attorney again had an interview with the examiner, who identified the prior art, discussed the '806 patent and the Thimon patent and entered the following comments in his interview summary record:

Applicant indicated that the stretching of the film in the prior art is determined by the forces applied to the film to achieve for example, 100% elongation while the application stretches by relying on the distance the [sic] film is to be stretched to reach the 100% elongation. It was also stated that ('806) could not consistently stretch past the yield point.

Joint Exhibit 90, paper 13 at 388.

16. Following the interview, the applicants filed another amendment to the claims on December 24, 1980. It was explained to the examiner that a device practicing the

'806 process was incapable of consistently stretching film past its yield point.

- 17. On February 24, 1981, the examiner indicated the proposed amendment of December 24, 1980 would not be entered in the record because the amendment did not place the application in condition for allowance and the previous rejection had been final. The applicants appealed the rejection to the PTO Board of Appeals on March 20, 1981, and the appeal was fully briefed by the applicants and the examiner. On June 15, 1983, the Parent Application was abandoned by applicants in favor of the Continuation Application filed by the applicants during the appeal.
- 18. The-Continuation Application repeated the original specification and original claims 1-76. By preliminary amendment, the applicants cancelled claims 2-76 and added claims 77-85, thus leaving claims 1 and 77-85, which corresponded to claims 1, 18, 31, 32, 35, 37, 57, 62 and 79 of the Parent Application as finally amended. Therefore, the Continuation Application merely resumed the patent prosecution where it had ended in December, 1980.
- 19. On June 28, 1982, the examiner rejected all ten of the pending claims, reestablishing his position that the claimed invention was obvious in light of Thimon and the '806.
- 20. Lancaster and his patent attorney requested an interview with the examiner. On July 15, 1982, Lancaster and his patent attorney conducted a demonstration for the examiner. During the demonstration, Lancaster exhibited and operated the claimed invention, a substantial equivalent of a Thimon apparatus and an '806 apparatus.
- 21. On July 16, 1982, Lancaster and his patent attorney reviewed the claims with the examiner and the significance of the demonstration as it related to the examiner's use of the prior art in rejecting the pending claims.

- 22. Applicants filed another amendment together with a Rule 132 affidavit on September 13, 1982. Although the applicants continued to assert the differences between the Thimon patent as not representing a teaching of a restricted roller together with a powered roller and the prior art failed to disclose the benefits of stretching film over the yield point, the examiner rejected the six remaining claims of the Continuation Application. The examiner rejected claims 70, 83 and 85 under 35 U. S. C. §103 as being unpatentable in light of Thimon and '806. The examiner made this rejection final.
- 23. Following this rejection, Lancaster and his attorney again met with the examiner for an interview on February 3, 1983. At this interview Lancaster again conducted a demonstration. The examiner's interview summary indicates that he was shown "an exhibit of stretching film with a force F, and reaching a certain elongation, further stretching past the yield point and then lowering force to the prior F, while having a much greater elongation than the original at F." Joint Exhibit 91, paper 13 at 902.
- 24. On March 16, 1983, the applicants filed an amendment accompanied by two Rule 132 affidavits of Lancaster. In the amendments, the applicants cancelled claims 83 and 84 without prejudice and amended claims 78-80.
- 25. The Rule 132 affidavit dealing with the '806 patent provided in pertinent part "[t]hat the apparatus set forth in the said U. S. Patent No. 3,867,806 has not to my knowledge been used to stretch film over its yield point in a commercial repetitive environment." Joint Exhibit 91, paper 15 at 910.
- 26. After a telephone discussion between the examiner and applicants' counsel, applicants filed a supplemental amendment incorporating the examiner's suggestions to clarify the methods of the claims. Thereafter, on March 29, 1982, the examiner gave notice that prosecution on the

merits of claims 78-80 and 85 was closed and that all four claims would be allowed. Therefore, applicants' claims were narrowed from seventy-eight original claims to four process claims. The examiner's entire comments were:

One of the reasons for allowance is the lack of showing in the prior art of prestretching a film web in a wrapping operation substantially past the yield point and then reducing the forces on the web. Commerical success was also a consideration in the allowance of the claims.

Joint Exhibit 91, paper 18 at 955.

27. The notice of allowance of the claims was mailed August 17, 1983, and the '510 patent entitled "Stretch Wrapping Apparatus and Process" issued December 6, 1983. Upon issuance, title to the '510 patent immediately vested in Lantech as assignee of Patrick R. Lancaster and William G. Lancaster.

III. The '510 Patent

28. The '510 patent was issued containing four independent process claims, each limited to a process in which unstretched film is removed from a roll and passed through a pair of stretching rollers in which the downstream roller is driven faster than the restricted upstream roller to effect stretching of the film. Each claim requires that the film be stretched over the yield point between the two stretching rollers. Each claim is further limited to a process step of reducing the force on the film as it exits the stretching rollers while maintaining a majority of the elongation originally incurred between the stretching rollers through inelastic strain recovery. The four claims disclose a process of stretch wrapping which is known as "powered prestretch."

- 29. Claim 1, the broadest claim of the '510 patent, reads as follows:
 - 1. A process of making a unitary package by wrapping a plurality of units with a stretched plastic material overwrap forming a unitary load comprising the steps of:
 - a. placing a load on a support;
 - positioning a roll of stretchable plastic material on a dispenser means adjacent to said support;
 - c. withdrawing a leading end of said plastic material from said dispenser means and passing said plastic material through a powered prestretch device adapted to drive the plastic material at a proportional speed with respect to the surface speed of the load, said prestretch device comprising a powered roller assembly with at least one rotationally restrictive roller assembly, said rotationally restrictive roller assembly being retarded to a substantially constant relative speed with respect to the rotationally powered roller assembly so that the plastic material is elongated substantially above its yield point between the roller assemblies, thereby changing strength characteristics and cross-sectional area of the plastic material:
 - d. holding said plastic material adjacent said load and simultaneously prestretching said plastic material substantially above the yield point by driving said prestretch device and causing relative rotation between said load and said dispenser means at a predetermined speed;
 - e. substantially reducing the force on the plastic material while maintaining the majority of the elongation incurred in said powered prestretch

device through inelastic strain recovery after it leaves the powered prestretch device; and

f. covering the load with previously elongated plastic material so that the units of the load are held under a compressive force.

Joint Exhibit 88 at col. 9.

30. Claims 2 through 4 are different from claim 1 in that they each require prestretch elongation above 100% in addition to "above" or "substantially above" the yield point.¹

IV. Validity Under 29 U.S.C. §103

- A. Scope and Content of Prior Art
- 31. To determine whether the '510 patent is obvious or nonobvious, the art of stretch wrapping is the pertinent art.
- 32. The parties stipulated that for purposes of this analysis, they would rely upon the prior art considered by the examiner during the prosecution of the Parent and Continuation Applications with the addition of several other pieces of prior art. Kaufman primarily relies on three prior art references in the pertinent stretch wrapping field for its assertion that the '510 patent is invalid under 35 U.S.C. §103. These prior art references are (1) the Thimon patent, (2) the '806 patent, and (3) the Infra-Pak Snakesheet (Snakesheet) dated February, 1978.
- 33. The Thimon patent and the '806 patent were considered by the PTO during the prosecution of the Parent and Continuation Applications.
- 34. The Snakesheet was not considered by the examiner during the prosecution of the '510 patent. The parties stipulated that the Snakesheet is pertinent prior art.

¹The entire text of the four claims of the '510 patent are set out in Appendix I.

1. The Thimon Patent

- 35. The Thimon patent, No. 2,281,275, is a French patent which issued on August 8, 1974 on the application of SAT (Thimon S.A.), a French corporation. The Thimon patent is entitled "Procedure and Device for Wrapping Goods Using a Film of Stretchable Plastic Material" and contains two processes and six apparatus claims.
- 36. Although the Thimon patent generally depicts a pass-through machine, the Thimon patent does depict in Figure 7 a process and apparatus in a rotary stretch wrapping context.
- 37. The Thimon patent describes a process for wrapping a load in stretchable plastic film characterized by stretching the film before applying the film to the load. The stretching of film is effectuated by passing the film over a first point (upstream roller) at a first speed V_1 and over a second point (downstream roller) from the upstream roller, at a second speed V_2 , V_2 being at a speed greater than V_1 and that the free film end of the stretched film is pulled in the same direction at a speed less than or equal to the V_2 in order to effectuate the wrapping of the load by the stretched film.
- 38. The Thimon patent also described that the force on the load was substantially below the force required for stretching the film.

2. The '806 Patent

- 39. The '806 patent discloses a process for stretch wrapping known as conventional stretch. Claim 1 discloses a process of wrapping a package by stretching film between a restricted film supply roll and a load which are rotated relative to each other. Claims 9 and 10 discuss elongating film between 2-100%.
- 40. Although Patrick Lancaster explained that the 2-100% elongation was merely a prediction about future film

performance, the '806 patent does disclose stretching film between 2% and 100% while the yield points of most films were stated by Lancaster to be between 15% and 40% elongation.

3. The Infra Pak Snakesheet

- 41. In February, 1978, a Lantech and Kaufman competitor produced a newsletter called "Snakesheet." Under the title "What Stretch Film to Use," the newsletter discusses the advantages and disadvantages of wrapping loads with polyethylene (PE) films or polyvinylchloride (PVC) films.
- 42. The newsletter compares the wrapping of a load with PE elongated 20-25% to PVC elongated 35-40%. The newsletter implies that PVC elongated 35-40% is past the yield point and into its ultimate range.
- 43. The Snakesheet describes what would happen to the PVC film when it is stretched past the yeild point. The newsletter discusses the "'new found' strength many times [the] normal level when [PVC films are] elongated past their 'yield' points." Joint Exhibit 127.

B. Level of Skill in the Art

44. A person of ordinary skill in the relevant art of stretch wrapping at the time of the invention claimed in the '510 patent would have been one with experience in designing and manufacturing machines for packaging loads by wrapping them with stretch film. Since the technology existing at the time of the '510 invention was not complex or sophisticated, this hypothetical person would not necessarily have had a technical degree or any degree and would have gained his skill through practical experience with shrink wrapping and conventional stretch wrapping.





- C. Differences between the '510 Patent and the Prior Art
- 45. The '510 patent discloses a process for stretch wrapping a load with plastic film where the film is first prestretched or elongated over its yield point between an upstream rotationally restricted roller at speed V_1 and then over a downstream rotationally powered roller at a speed V_2 , and V_2 is at a speed greater than V_1 . The film is then wrapped on a load with a wrapping force less than the force used to prestretch the film above its yield point.
- 46. Although the Thimon patent mainly discusses a pass-through stretch wrapping procedure, Figure 7 does depict a process of wrapping a load with plastic film where the film is prestretched by passing the film over an upstream roller at a speed V_1 and then over a downstream roller at a speed V_2 , and V_2 is at a speed greater than V_1 . The film is wrapped on the load with a wrapping force less than the force used to prestretch the film.
- 47. The evidence established that Thimon invented "prestretch" and the Lancasters developed a narrow variation of the prestretch. However, the Thimon patent does not mention the use of a restricted upstream roller or powered downstream roller. While a major objective of the Thimon patent was to make it possible in a pass-through machine to reduce the force that was placed on the load, the Thimon patent does not explicitly disclose a process of elongating film levels over its yield point. Further, the specifications and claims do not describe the increased strength characteristics attained when film is stretched over its yield. However, the Thimon and the '510 each discuss the advantages of prestretching the film and reducing the force on the load.
- 48. Although the '510 patent claims a process of wrapping the film on a load while the film undergoes inelastic

strain recovery, the Thimon patent does not disclose this process but does disclose the reduction of force on the load between the downstream roller and the load. Furthermore, the Thimon patent does explain that stretchable polyethylene film requires a stretching force to achieve a given percentage of stretching which is substantially greater than the force which suffices to maintain that degree of stretching.

49. Although the '806 patent does state that films may be elongated 2-100%, it does not discuss the benefits of stretching a film beyond its yield point. Further, the '806 patent claims a process of stretching film between a restricted supply roll and the load, not a process that prestretches the film prior to application of the film onto the load. Because Lantech was using the '806 conventional stretch wrapping machine to stretch film over the yield point, this Court determines that this is persuasive evidence suggesting the ability of the '806 patent to stretch film beyond the yield point.

50. While the Snakesheet does discuss the advantages of stretching film beyond its yield point, the Snakesheet does not discuss the stretching of the film in a prestretching device and then reducing the force on the film between the prestretching device and the load.

D. Objective Criteria of Nonobviousness

51. The objective criteria of nonobviousness may include long felt need in the stretch wrapping industry, commercial success of the invention, competitive disbelief and then positive response, and the existence of licensing agreements.

1. Long Felt Need

52. By the 1970's the stretch wrapping industry had reached a technological plateau. The purchasers of stretch

wrapping machines were seeking more consistent and reliable ways to unitize a variety of products.

53. As disclosed in Thimon, the development of prestretch expanded the use of stretch wrapping to new applications that could not previously be served by the existing wrapping machines due to the cost of the wrap or the nature of the product. The advantages of reducing the force on the load allowed stretch wrapping to become an effective form of packaging for products that damaged easily from application of force to the load. Some of the new markets for stretch wrapping included bath tissue, PET bottles and empty aluminum cans. Although Lantech claims these advantages as developed by the '510 patent, these are advantages of Thimon as embodied in the '510 patent.

2. Commercial Success

- 54. At the October, 1980 PMMI trade show, Lantech demonstrated the operations of powered and nonpowered prestretch machines to potential customers. These demonstrations showed the high level of film elongation that could be achieved as well as the low level of force applied to the load at those levels of elongation.
- 55. The Lantech powered prestretch machines received an enthusiastic response after being introduced at the 1980 and 1981 trade shows. Also, Lantech's competition, with the exception of Kaufman, developed powered prestretch wrapping equipment after Lantech's introduction of the machines in 1980.
- 56. Lantech's order entry sales and machine sales establish that, by the fourth quarter of 1980, Lantech's film driven prestretch machine was the dominating product line and by the second quarter of 1982 to present, the powered prestretch machine has dominated Lantech's product line.
- 57. The totality of the evidence establishes that Lantech's powered prestretch machine practicing the claims

of the '510 patent as demonstrated at the 1980 PMMI with levels of elongation beyond the yield point and a reduction of force of the load achieved commercial success in the United States marketplace.

3. Competitive Disbelief, then Positive Response

- 58. Before the formal introduction of prestretch by Lantech, competitors sought to discredit it as a method of stretch wrapping. Lantech's competitiors talked about the reasons why it would not work; i.e., the film could not be stretched that far, it was not recommended by the film companies to stretch film, and that the load would not be able to handle the force.
- 59. After the introduction of powered prestretch at the 1980 PMMI show, Lantech's major competitors displayed a powered prestretch machine at a 1981 spring trade show.

4. The Existence of Licensing Agreements

60. Lantech has executed license agreements with competing manufacturers of stretch wrapping machinery including: Muller Manufacturing Ltd. and Muller Manufacturing, Inc. [consent judgment of validity, enforceability and infringement and license agreement for the life of the '510 patent]; Liberty Industries, Inc. [license agreement for the life of the '510 patent]; Clearview Packaging Systems [license agreement for the life of the '510 patent]; Master Conveyor Company, a wholly owned subsidiary of Bemis Company, Inc. [license agreement for the life of the '510 patent]; and International Packaging Machinery, Inc. [license agreement for the life of the '510 patent]. Lantech has also entered into agreements with certain manufacturers that they will not infringe the '510 patent.

V. Enforceability of the '510 Patent

- 61. Because of alleged inequitable conduct by the applicants, Kaufman's accusations regarding the enforceability of the '510 patent focus on (1) the '806 patent and the performance of conventional stretch wrapping machines; and (ii) the Thimon patent.
- 62. The '806 machine is a conventional stretch wrapping machine. A conventional stretch wrapping machine stretches the film by the use of a friction or other breaking device including a magnetic brake, thereby inducing drag on the film by breaking the rotation of the film dispenser roll. Therefore, the stretching of the film takes place between the braked roll or roller and the rotating load.
- 63. Kaufman's allegations of inequitable conduct before the PTO are that the applicants of the Parent and Continuation Applications continually explained to the examiner that the '806 patent did not teach how to elongate film substantially above the yield point; the applicants' filing of a Rule 132 affidavit explaining that conventional stretch wrapping machines were not known to have been used to elongate film above its yield point in a commercially repetitive environment; the applicants conducting a demonstration in Baltimore for the examiner; in a noncommercially repetitive environment, exhibiting the operation of a conventional stretch wrapping machine; and, following the Baltimore demonstration, the applicants did not provide the examiner with Lantech's in-house test data which exhibited the stretching of film substantially over the yield point.
- 64. Although the '806 patent describes that a conventional stretch wrapper is capable of film elongation levels between 2-100%, the conventional stretch wrapping machines were not being used in a commercially repetitive environment to stretch film beyond its yield point.

- 65. An '806 patent conventional stretch wrapper was being used at the Lantech facilities to elongate film beyond its yield point.
- 66. Prior to Mr. Lancaster's representations to the examiner in December, 1980 regarding the inability of the '806 machine to stretch film, he was aware of the following information and data recorded by Lantech employees:
 - a. A conventional stretch apparatus consisting of a test stand with a round drum for a load and a close duplication of a commercially available conventional stretch apparatus having a commercial brake was used to stretch film over the yield point.
 - b. A Lantech employee, Bill Redden, conducted a plurality of tests using a conventional '806 stretch apparatus and Mobil X film to achieve elongation levels on the film of 5% to 295%.
 - c. A Lantech employee, Dan Haas, used a conventional '806 stretch apparatus to wrap a square load with Mobil X film at elongation levels of 70% to 92% and 110%.
 - d. A Lantech employee, Terry Mouser, used a conventional '806 stretch apparatus to wrap a load having 1" to 4" projection with Mobil X film. Elongation levels of 30.6% to 192% were achieved. The data indicates that the film only ruptured once.
 - e. Lantech employees used a Lantech commercially available SVS-80 conventional '806 stretch machine to stretch film at elongation levels between 30% and 170% over a load having 1" to 4" projections. The film did not fail at any of the applied elongation levels for the 1" projection and only failed once for the 2" projections.
 - f. Lantech employees created a group of test data comparing the Lantech SVS-80 conventional stretch

machine with a new Lantech Roller Stretch film driven prestretch machine. The conventional stretch machine was used to stretch Mobil X film to 93% elongation. The film did not rupture.

- 67. Although the Rule 132 affidavit using the phrase "commercial environment" was intended to refer to the day-to-day operation of a conventional stretch wrapper in a customer's plant, the Baltimore demonstration was not conducted in a commercial repetitive environment.
- 68. At the Baltimore demonstration, Patrick Lancaster demonstrated that a conventional stretch wrapper was capable of stretching film to a 45% elongation before the brake locked up and there was loss of control of the film rupturing at 150% elongation.
- 69. The subsequent demonstration by Lancaster in Court and Kaufman's demonstration for the Court exhibited the ability of a conventional stretch wrapping apparatus to stretch film beyond its yield point. Although the tests were not conducted in a commercially repetitive environment, Lantech's courtroom demonstration, Lantech's in-house test data and Kaufman's demonstration are not completely consistent with the Baltimore demonstration.
- 70. The demonstration conducted for the Court depicted the ability of an '806 conventional stretch machine to stretch film substantially beyond its yield point.
- 71. Specifically, during Lantech's courtroom demonstration, the demonstration machine set up to duplicate an '806 conventional stretch apparatus stretched Mobil X film to 120% elongation. The film did not rupture until Lancaster punctured it with a knife. The brake operated smoothly and did not lock up.
- 72. The Kaufman demonstration of the Lantech conventional SVS-80 Landwrapper was a demonstration of a commercial machine wrapping a commercial load with a

commercial film. Although the demonstration was not conducted in a commercially repetitive environment, Kaufman demonstrated that the Lantech conventional '806 machine could easily stretch Mobil X film at elongation levels of 37-40%, 60-65%, 90-97% and 115-130% without ever rupturing the film or seriously damaging the contents of the load.

- 73. The yield point of Mobil X film was exceeded on the conventional stretch apparatus demonstrated in Court and at Kaufman's plant.
- 74. Although the Baltimore demonstration did exhibit the stretching of film beyond the yield point by a conventional stretch wrapping apparatus, the demonstration exhibited that a conventional stretch wrapping apparatus was "out of control" at high levels of elongation.
- 75. Because the in-house test data, including failure testing, did not exhibit that the conventional stretch wrapping apparatus was always "out of control" at high levels of elongation, the in-house test data was neither cumulative nor consistent with the Baltimore demonstration.
- 76. Although Lancaster knew of the in-house test data and the results of these tests, he did not reveal to the examiner that Lantech had conducted these tests or the results of the tests.
- 77. Also, at the Baltimore demonstration Lantech demonstrated an equivalent of the Thimon machine. During this demonstration, the Thimon machine would not operate because the two power driven rollers could not maintain distinctly different speeds V_1 and V_2 as required by Thimon. Mr. Lancaster designed the Thimon equivalent so that the powered downstream roller overdrove the powered upstream roller, thereby negating any appreciable stretching of the film between the rollers.
- 78. Although Mr. Kaufman also demonstrated a Thimon equivalent with two power driven rollers, the motors

were configured with regenerative drives, thereby enabling the upstream motor to brake and retard the upstream roller. Kaufman's Thimon equivalent did stretch Mobil X at approximately 100%.

VI. Infringement, Inducement and Contributory Infringement

- 79. The four claims of the patent in suit are process claims. The process claims define operative steps for applying stretched film to a load for unification of the load.
- 80. In order the reach a determination on the issues of infringement, the Court must define the scope of the claims. Each of the claims require that the film be prestretched substantially beyond the yield point of the film and that the forces be reduced with inelastic strain recovery as a technique for reducing film web forces while maintaining a majority of the prestretch elongation. Because of Kaufman's arguments of invalidity and noninfringement, the Court determines that it is necessary to consider extrinsic evidence to construe the terms in the claims in order to determine the scope of the claims.
- 81. In light of the circumstances surrounding the invention, the specifications, drawings and prosecution history of the patent, and the testimony of expert witnesses for both parties, Dr. Phil Geil for Lantech and Dr. Larry Broutman for Kaufman, the Court finds that one skill in the art of stretch wrapping would understand certain terms in the claims language as follows:
- a. Yield point is the boundary between the regions of elastic and inelastic behavior of a plastic film. A film that has been stretched behaves elastically if, when the stretching force is relieved or unloaded to any degree, the film assumes approximately the same size and shape that it had at the unloaded force before it was stretched. A film that

has been stretched behaves inelastically if, when all or a certain portion of the stretching force is relieved or unloaded, the film assumes a different size and shape than it had at the unload force before stretching. It is standard practice for film companies and other stretching film to determine the yield point by finding its coordinates on a stress/strain or force/elongation curve of a film sample. This is normally done by laying construction lines on the substantially vertical plane depicting the elastic region and substantially horizontal plane depicting the inelastic region and then bisecting the angle where those lines meet and extending the bisecting line so that it intersects the stress/strain or force/elongation curve. The point of intersection is the yield point. The yield point is generally expressed in percent of elongation.

- The word "substantially" as used in "substantially above the yield point" or "substantially reducing the force" is used in the common-sense meaning of substantial. In the context of the claims of the '510 patent, substantially means enough to obtain the benefits sought to be obtained by the operation being described. Thus, "substantially above the yield point" means enough over the yield point to enable the film to retain its prestretch length when the force is reduced or eliminated. A "substantial reduction of force" from the prestretching force to the wrap force in the context of the claims of the '510 patent means a force reduction which is consistent with high levels of prestretch elongation and low enough levels of wrap force that loads may be effectively wrapped with highly stretched film. Therefore, "substantially" as used in the '510 patent was not intended to be quantitatively restricted to a specific numerical figure.
- c. "Inelastic strain recovery" is a term used by the inventors to explain reduction in force by which the wrap

force is less than the prestretch force at which the film is elongated above its yield point, yet a majority of the prestretch elongation is maintained during the wrapping of the load. Inelastic strain recovery will occur when there is additional elongation of the film in the region between the downstream roller and the load, so long as the force between the downstream roller and the load is less than the force between the upstream and downstream rollers. The courtroom demonstration and the operation of the Lantech and Kaufman powered prestretch machines exhibit force reduction from the poststretch zone to the wrap zone coexistent with additional or poststretch elongation of the film above the prestretch level. The Court determines from the evidence that such force reduction can and does take place at the same time that additional poststretch elongation above the prestretch elongation is achieved. This can occur because it takes a higher force to achieve a given prestretch elongation level between two closely spaced prestretching rollers, than it does to achieve or maintain the same degree of elongation in a wrap zone where the width of the film is released and allowed to flow to length. Dr. Geil expresses this phenomenon in terms of the differences between biaxial and uniaxial stretching. This construction of the term "inelastic strain recovery" is consistent with the examiner's expressed understanding of the inventors' use of the term.

82. In order to gather evidence on the operation of the accused Stretch Command III (SCIII) as used by Kaufman and its customers, the parties entered into a stipulated testing protocol. The stipulated testing protocol required Mr. Kaufman to gather certain measurable data from eight of Kaufman's customers using a SCIII machine in actual commercial operations. After the field data was gathered, the parties jointly replicated the customers' operations of a Kaufman machine instrumented to provide data relating

to the prestretch and poststretch forces and elongation levels.

- 83. The data gathered in the Kaufman's customers facilities and in joint testing in the Kaufman plant, together with further Lantech confirmation of the data generated during testing at the Lantech plant on its powered prestretch machine, is for fifteen different Kaufman machine operations at eight Kaufman customer locations.
- 84. All of the Kaufman machines from which data was gathered in the field by Charles Kaufman were spiral SCIII machines on which the downstream roller was connected to a motor and the upstream and downstream rollers were connected by a belt and cone system which allowed for customers' adjustments of the prestretch level in a range typically between 50% and 165% or 120% and 240%. Each machine also allowed for adjustment of the relative surface speeds of the downstream roller and the load (and thus the wrapping force or wrapping elongation level) through a potentiometer on the machine.
- 85. Two of the customer operations at a Campbell Soup plant could not be duplicated by Kaufman and Lantech, one because of deficiencies in the data gathered and the other because the precise film used by the customer was unavailable.
- 86. Based upon all the testing and data available for each of the remaining thirteen customer operations from which data was gathered by Kaufman, including a third at the Campbell Soup plant: (i) the film was stretched substantially over its yield point in the area between the stretching rollers; (ii) the force used to stretch the film between the rollers was greater than the reduced wrapping force on the film as it was wrapped on the load; and (iii) the majority of the prestretch elongation was actually placed on the load in the wrapping operation. In addition, (iv) the upstream stretching roller was rotationally re-

stricted and the downstream stretching roller was rotationally powered; and (v) inelastic strain recovery was present because the film had been stretched above its yield point at a first force and then wrapped on the load at a second reduced force while a majority of the prestretch elongation was maintained regardless of whether additional stretch had occurred between the downstream roller and the load.

A. Literal Infringement

87. Lantech's patent expert, Mr. Pravel, compared each claim of the '510 patent to the test data from each of the thirteen machine operations as to which complete data was available. Mr. Pravel's comparison of the machine operations and the claims included reliance upon the test information as testified to by Mr. Lancaster, certain of Mr. Kaufman's testimony, and a number of stipulations entered into by the parties. Mr. Pravel testified and the Court determines that the test data demonstrates the thirteen machine operations practiced the processes of the claims by performing each and every step of the claims as designated in the following chart:

Customer			Claim	
Location	1	2	3	4
1	X	X	X	X
2A	X			
2B	X			
3A	X	X	X	X
4A	X			
4B	X			
4C	X			
5A	X			
5B	X			

Customer	Claim		im	
Location	1	2	3	4
6	x	x	X	x
7A	X			
7B	x			
8	x			

- 88. Five of the thirteen infringing machine operations in Joint Exhibit 224 4A, 4C, 5B, 7A and 7B exhibited positive poststretch and a reduction of force from the prestretch area to the wrapping area. The other eight exhibited negative poststretch and a force reduction between the poststretch area and the wrapping area. Positive poststretch is additional elongation of the film between the downstream stretching roller and the load; negative poststretch is a reduction in the level of elongation in the same region; zero poststretch indicates no change in elongation level.
- 89. Any of the three poststretch conditions will result in literal infringement assuming all other process steps are present. The '510 patent does not limit the process to a negative or zero poststretch condition.
- 90. There is considerable uncontradicted evidence of Kaufman's use of SCIII machines, both at its plant and at customer plants, to practice the process of the '510 patent. Much of this use is stipulated between the parties and the rest of the evidence either comes from Kaufman service and startup documents or the trial testimony of Charles Kaufman or the depositions of three Kaufman employees which were admitted as evidence in the trial by stipulation of the parties. See Joint Exhibits 213-16; Trial Transcript 734-64; Deposition of Shaffer, Landrum and Phillips.
- 91. This evidence shows the uses of Kaufman SCIII machinery by Kaufman personnel in ways that for pur-

poses of the infringement analysis are functionally identical to the ways the machines were used by customers as reflected in the testing protocol data:

- (a) testing of the machinery in the Kaufman plant;
- (b) startup, service, training of customer personnel and adjustment of prestretch variables in the customer plants using customer machines.

B. Aiding and Abetting Infringement

- 92. Based upon the extensive field testing showing customer use of the machines; testing at the Kaufman plant; reproduction testing at the Lantech plant; the testimony of Messrs. Lancaster and Pravel; and evidence of Kaufman's use of the machines, the Court finds that Kaufman SCIII machines as operated for commercial stretch wrapping by customers of Kaufman and as operated by Kaufman for its purposes as a manufacturer of the machines have infringed and do infringe one or more of the process claims of the '510 patent.
- 93. The evidence demonstrates that Kaufman conducts its commercial activities marketing, promotion, startup and service—such that the customers are encouraged, shown and taught to use the Kaufman powered prestretch machinery in the same fashion as demonstrated by the testing protocol which the Court has found to be infringing.
- 94. Because of the extensive stipulations, the Court determines that the following is representative of Kaufman's actions:
 - a. Kaufman published and disseminated brochures, manuals and other communications with customers and distributors explaining the benefits of powered prestretch machinery consistent with the benefits of the process of the '510 patent.

- b. Kaufman sent quotations to customers offering powered prestretch machinery.
- c. Kaufman retrofitted SCIII powered prestretch machinery to nonpowered prestretch and conventional stretch wrapping machines.
- d. Kaufman trained its customers and distributors how to adjust the prestretch elongation and poststretch elongation on Kaufman powered prestretch machinery and how to adjust the level of force on the film as it is wrapped on the load.
- e. Kaufman maintained, repaired and reset customer machines in the field during service calls.
- f. Kaufman conducted testing of machines in its plant, sometimes using customer loads, films and desired machine settings, in circumstances consistent with the operations of the machinery found in the testing protocol.

These activities took place after Lantech's September, 1984-cease and desist letter informing Kaufman of Lantech's belief that the SCIII infringed one or more claims of the '510 patent.

C. Contributory Infringement

- 95. Although it is conceivable to use the powered prestretch machine in a way outside the claims of the patent, for example, if the film were not prestretched above its yield point or the wrap force was increased above the prestretching force, it would not be economical to use the machine in these ways.
- 96. If the yield point were not exceeded, the critical benefits of the invention could not be achieved and one would merely have an expensive conventional stretch wrapping machine. A significant benefit of the invention is the

ability to prestretch to high elongation at high forces and then to wrap with lower forces on the load, while maintaining most of the high elongation of the prestretch.

- 97. Based upon all the evidence, the Court finds that the only substantial economic and practical use of powered prestretch wrapping machines such as Kaufman's SCIII is in the practice of the process disclosed and claimed in the '510 patent. Any other stretch wrapping use would be a conventional stretch wrapping operation which could not be justified economically by one who had spent the funds necessary to purchase one of these powered prestretch machines.
- 98. As previously discussed in Finding of Fact 94, Kaufman had knowledge of the existence of the '510 patent no later than September, 1984.
- 99. The Court determines that Kaufman powered prestretch machinery is not a staple article of commerce suitable for substantial noninfringing use, but rather is an apparatus knowingly designed and sold by Kaufman for the specific purpose of practicing the powered prestretch process which is covered by the claims of the '510 patent.

CONCLUSIONS OF LAW

- 1. This Court has jurisdiction over the parties and the subject matter of this action pursuant to 28 U.S.C. §1338(a).
- 2. Venue in this district is proper pursuant to 28 U.S.C. §1391(c).
- 3. Pursuant to 28 U.S.C. §1295(a)(1), the Court of Appeals for the Federal Circuit will have exclusive jurisdiction of any appeal from the judgment of this Court because this Court's jurisdiction is based on 28 U.S.C. §1338. Consolidated World Housewares, Inc. v. Finkle, 831 F. 2d 261, 265 (Fed. Cir. 1987).

- 4. This Court recognizes that the decisions of the Court of Appeals for the Federal Circuit are binding precedent as to patent matters. Steward-Warner Corp. v. City of Pontiac, Michigan, 767 F. 2d 1563, 1567-68 (Fed. Cir. 1985); Radio Steel & Mfg. Co. v. MTD Prods. Inc., 566 F. Supp. 609, 613-14 (N.D. Ohio 1983), modified on other grounds, 731 F. 2d 840 (Fed. Cir.) (cert. denied, 469 U.S. 831 (1984).
- 5. The Court of Appeals for the Federal Circuit has adopted as precedent the decisions of its predecessor courts, the United States Court of Customs and Patent Appeals and the United States Court of Claims. South Corp. v. United States, 690 F. 2d 1368, 1369 (Fed. Cir. 1982).
- 6. This Court will follow the decision of the Sixth Circuit and it will consider decisions of other courts of appeal where no Sixth Circuit precedent exists, unless a contrary ruling has been made on a point of patent law by the Court of Appeals for the Federal Circuit or one of its predecessors. *Radio Steel*, 566 F. Supp. at 613-14.

I. Validity

- 7. The patentability of any claimed invention is dependent upon the existence of three statutory requirments: (1) utility, 35 U.S.C. §101; (2) novelty, 35 U.S.C. §102; and (3) nonobviousness, 35 U.S.C. §103. United States v. Adams, 383 U.S. 39, 48 (1966); Structural Rubber Prods. Co. v. Park Rubber Co., 749 F. 2d 707, 714 (Fed. Cir. 1984).
- 8. The statutory presumption of validity is a procedural device which places the burden of proof on the party asserting invalidity to establish a prima facie case. 35 U.S.C. §282 (1984).² Therefore, Kaufman assumes the

²Section 282 of Title 35 provides in part:

A patent shall be presumed valid. Each claim of a patent (whether in independent, dependent, or multiple dependent (Footnote Continued on Next Page)

burden of overcoming the presumption of validity by clear and convincing evidence. Further, the presumption of validity is applicable to all the essential requirements of patentability. Panduit Corp. v. Dennison Mfg. Co., 810 F. 2d 1561, 1569-70 (Fed. Cir.), cert. denied, 107 S. Ct. 2187 (1987), on remand from, 475 U.S. 809 (1986); Kaufman Co., Inc. v. Lantech, Inc., 807 F. 2d 970, 973 (Fed. Cir. 1986); Metronic, Inc. v. Intermedics, Inc., 799 F. 2d 734, 741 (Fed. Cir. 1986), cert. denied, 107 S. Ct. 882 (1987); Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co., 730 F. 2d 1452, 1459 (Fed. Cir. 1984).

9. Reliance by a party upon prior art not considered by the PTO to establish invalidity does not shift the burden of proof Alco Standard Corp. v. TVA, 808 F.2d 1490, 1497-98 (Fed. Cir. 1986), cert. dismissed, 108 S. Ct. 26 (1987). The presumption of validity remains the same and the burden

(Footnote Continued From Preceding Page)

form) shall be presumed valid independently of the validity of other claims; dependent or multiple dependent claims shall be presumed valid even though dependent upon an invalid 'claim. The burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity.

The following shall be defenses in any action involving the validity or infringement of a patent and shall be pleaded:

⁽¹⁾ Noninfringement, absence of liability for infringement or unenforceability,

⁽²⁾ Invalidity of the patent or any claim in suit on any ground specified in part II of this title as a condition for patentability,

⁽³⁾ Invalidity of the patent or any claim in suit for failure to comply with any requirement of sections 112 or 251 of this title,

⁽⁴⁾ Any other fact or act made a defense by this title. 35 U.S.C. §282 (1984).

remains on the challenger throughout the litigation. Although the burden is never destroyed, the burden of proving invalidity may be facilitated where prior art not considered by the examiner is introduced at trial. Kaufman, 807 F. 2d at 973 (Fed. Cir. 1986); W. L. Gore & Assoc., Inc. v. Garlock, Inc., 721 F. 2d 1540, 1553 (Fed. Cir. 1983), cert. denied, 469 U. S. 851 (1984).

A. Obviousness

10. At trial Kaufman did not present any evidence or challenge the utility or novelty of the '510 patent. Therefore, Kaufman's only challenge of the '510 patent is for obviousness pursuant to 35 U.S.C. §103.

11. Section 103 of Title 35 provides in part:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in Section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the matter in which the invention was made.

35 U.S.C. §103 (Supp. 1987).

- 12. Kaufman has the barden of establishing by clear and convincing evidence that one of ordinary skill in the pertinent art would have found the subject matter claimed in the '510 patent, as a whole, obvious at the time the invention was made. *Panduit*, 810 F. 2d at 1566; *Kaufman*, 807 F. 2d at 975.
- 13. In Graham v. John Deere Co., 383 U. S. 1 (1966), the Court determined that the standard of inquiry on a

claim of obviousness requires a consideration of four factors: (1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; (3) the level of ordinary skill in the pertinent art; and (4) any objective criteria of nonobviousness. *Id.* at 17-18.

- 14. Pursuant to 35 U. S. C. §103, the issue of obviousness is a question of law, although the criteria for determining obviousness is based on factual inquires. Therefore, obviousness is a legal conclusion based on factual findings. Graham, 383 U. S. at 35-36; Burlington Indus., Inc. v. Quigg, 822 F. 2d 1581, 1583 (Fed. Cir. 1987); Panduit, 810 F. 2d at 1566-68; American Hoist & Derrick Co. v. Sowa & Sons, Inc., 725 F. 2d 1350, 1361 (Fed. Cir.), cert. denied, 469 U. S. 821 (1984).
- 15. All evidence bearing on the issue of obviousness, including any objective criteria which is present, must be considered and evaluated before a legal conclusion on this issue is reached. Panduit, 810 F. 2d at 1570; Custom Accessories v. Jeffrey- Allan Indus., Inc., 807 F. 2d 955, 960-61 (Fed. Cir. 1986); Simmons Fastener Corp. v. Illinois Tool Works, Inc., 739 F. 2d 1573, 1576 (Fed. Cir. 1984), cert. denied, 471 U. S. 1065 (1985).
- 16. The objective criteria which may be considered include: commercial success, failure of others, long felt need, skepticism of experts, and other circumstantial evidence of nonobviousness. *Graham*, 383 U. S. at 17-18; *Adams*, 383 U. S. at 51.

1. Scope and Content of the Prior Art

17. The prior art which is pertinent to the defense of alleged obviousness under 35 U. S. C. §103 is that art in which is found the problems addressed or solved by the patent in suit. This is the art which one can reasonably be expected to look for a solution to the problems to which the

patented subject matter is directed. Graham, 383 U.S. at 35.

- 18. The scope of prior art is that which is reasonably pertinent to the particular problem with which the patentee was involved. Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc., 796 F. 2d 443, 449 (Fed. Cir. 1986), cert. denied, 108 S. Ct. 85 (1987); In Re Deminski, 796 F. 2d 436, 441-42 (Fed. Cir. 1986).
- 19. In determining the scope and content of prior art, prior art must be considered as a whole, including portions of the prior art that would lead away from the patent in suit. *Panduit*, 810 F. 2d at 1568; W. L. Gore, 721 F. 2d at 1550.
- 20. The Court has found that the pertinent art in this case is the art of stretch wrapping the art of unitizing a load by stretching previously manufactured plastic material and wrapping it around the load.

2. The Level of Ordinary Skill in the Pertinent Art

21. In determining whether a patent is invalid under 35 U. S. C. §103, the court must determine the question of obviousness by reference to a hypothetical person having skill in the art not the extraordinary man in the art or the actual inventor. Standard Oil Co. v. American Cynamid Co., 774 F. 2d 448, 454 (Fed. Cir. 1985); Kimberly-Clark Corp. v. Johnson & Johnson, 745 F. 2d 1437, 1449-54 (Fed. Cir. 1984). Therefore, pursuant to 35 U. S. C. §103, a claim is invalid only where the invention set forth would have been obvious to one of ordinary skill in the art, therby precluding consideration of whether the invention was obvious to one of rare genius or to a judge or other layman. Bausch & Lomb, 796 F. 2d at 448; Standard Oil, 774 F. 2d at 454; Environmental Designs v. Union Oil Co., 713 F. 2d 693, 696 (Fed. Cir. 1983), cert. denied, 464 U. S. 1043 (1984).

- 22. When deciding whether the claimed invention as a whole would have been obvious at the time of the invention to one of ordinary skill in the art, the court must avoid hindsight. Panduit, 810 F. 2d at 1568; Bausch & Lomb, 796 F. 2d at 448; W. L. Gore, 721 F. 2d at 1553. The issue of obviousness cannot be decided by taking the claimed invention as a framework and the separate prior art references to recreate a facsimile of the claimed invention. To engage in this type of analysis "is to fall victim to the insidious effect of hindsight wherein that which only the inventor taught is used against the teacher." W. L. Gore, 721 F. 2d at 1553.
- 23. In evaluating the level of skill of the hypothetical person, the court will consider: the type of problems encountered in the art; prior art solutions; rapidity of innovation; sophistication of technology; educational level of active workers in the field and educational level of the inventor. Bausch & Lomb, 796 F. 2d at 449-50; Environmental Designs, 713 F. 2d at 697. Although the educational level of the inventor may be a relevant factor, it is by no means conclusive. Orthopedic Equipment Co., Inc. v. All-Orthopedic Appliances, Inc., 707 F. 2d 1376, 1382 (Fed. Cir. 1983).
- 24. The hypothetical person having ordinary skill in the art is deemed to be aware of all the pertinent art. *Bausch & Lomb*, 796 F. 2d at 448.
- 25. The Court has found that a person having ordinary skill in the relevant art would be one with experience in designing and manufacturing machines for unitizing loads by stretching previously manufactured plastic film and wrapping it around a commercial load.

3. Differences Between the Prior Art and the '510 Patent

26. Consideration of the differences between the prior art cited by Kaufman and the invention claimed in the '510

patent aids in the ultimate determination of whether the claimed invention as a whole would have been obvious. Bausch & Lomb, 796 F. 2d at 449.

- 27. The presence of some or even all of the elements of a combination in the prior art does not preclude a finding of invention when the elements are combined to produce a new or better result. Adams, 383 U. S. at 51-52; Custom Accessories, 807 F. 2d at 959-60; Fromson v. Advance Offset Plate, Inc., 755 F. 2d 1549, 1556 (Fed. Cir. 1985); Kimberly-Clark, 745 F. 2d at 1448-49.
- 28. In analyzing the differences between the prior art and the '510 patent, the Court is cognizant that: "(1) the claimed invention must be considered as a whole; (2) the references must be considered as a whole and suggest the desirability and thus the obviousness of making the combination; (3) the references must be viewed without the benefit of hindsight vision affored by the claimed invention; and (4) 'ought to be tried' is not the standard with which obviousness is determined; and (5) the presumption of validity remains constant and intact throughout the litigation. . . ." Hodosh v. Block Drug Co., Inc., 786 F.-2d 1136, 1143 n.5 (Fed. Cir.), cert. denied, 107 S. Ct. 106 (1986) (citations omitted); see also Panduit, 810 F. 2d at 1568.

4. Objective evidence of nonobviousness

29. Objective evidence of nonobviousness may often be the most probative, cogent, and revealing evidence on the issues of obviousness/nonobviousness. It may often establish that the claimed invention which appears obvious in light of the prior art is, indeed, nonobvious. Objective evidence is helpful because it addresses economic and motivational factors, rather than technical problems. A failure by a court to consider objective evidence in reaching a determination on the issue of nonobviousness constitutes reversible error. Panduit Corp. v. Dennison Mfg. Co., 774

- F. 2d 1082, 1099-1100, (Fed. Cir. 1985), vacated on other grounds and remanded, 475 U. S. 809 (1986); Pentec, Inc. v. Graphic Controls Corp., 776 F. 2d 309, 315 (Fed. Cir. 1985); Rosemount, Inc. v. Beckman Instruments, Inc., 727 F. 2d 1540, 1546 (Fed. Cir. 1984).
- 30. A consideration of objective evidence of nonobviousness also guards against the court applying hindsight to read into the prior art the teachings of the claimed invention at issue. Custom Accessories, 807 F. 2d at 960;
- 31. Evidence that the '510 invention greatly expanded the overall stretch wrapping market because it could stretch wrap items that could not have been stretch wrapped using the prior art would militate against a finding of obviousness. Medtronic, Inc. v. Daig Corp., 611 F. Supp. 1498, 1529-32 (D. Minn. 1985), aff'd, 789 F. 2d 903, 906-07 (Fed. Cir.), cert. denied, 107 S. Ct. 402 (1986). However, since Thimon as embodied in the '510 patent disclosed the process by which this advantage was effectuated, this objective evidence of nonobviousness cannot be totally attributed to the '510 patent.
- 32. Evidence of Lantech's commerical success with powered prestretch machines in the United States is a factor bearing on the nonobviousness of the patent in suit. Kloster Speedsteel v. Crucible Inc., 793 F. 2d 1565, 1574-75, modified on reh'g, 231 U. S. P. Q. 160 (Fed. Cir. 1986), cert. denied, 107 S. Ct. 882 (1987); Lindemann, 730 F. 2d at 1461; Armco, Inc. v. Republic Steel Corp., 707 F. 2d 886, 889-90 (6th Cir. 1983).
- 33. Experts' disbelief as to the feasibility of the invention claimed in the '510 patent may be taken into account and support a finding of nonobviousness. *Adams*, 383 U.S. at 52.
- 34. Lantech has presented evidence regarding industry acceptance of the invention. This evidence consisted of licensing agreements for the '510 patent entered into under

threat of litigation. Because a decision to take licenses may be made for reasons unrelated to the nonobviousness of the licensed invention, this secondary consideration must be carefully appraised. *EWP Corp.* v. *Reliance Universal Inc.*, 775 F. 2d 898, 907-08 (Fed. Cir.), *cert. denied*, 474 U. S. 843 (1985).

Based on Findings of Fact 31-60, this Court determines that Kaufman has established by clear and convincing evidence that the claimed invention of the '510 patent would have been obvious to one of ordinary skill in the art. In making this determination, the Court has considered the objective criteria as previously discussed, has avoided the use of hindsight and has steadfastly recognized the presumption of validity. The applicants' invention was the Thimon invention of prestretching with a reduction of force on the load. However, the '510 patent had the added improvement over Thimon of stretching film beyond the yield point. The '806 patent and the Snakesheet disclosed the advantages and suggested the desirability of stretching film over the yield point. Further, although the '510 patent discloses the reduction of force between the downstream roller and the load as a unique characteristic, one skilled in the art would have read the Thimon patent as suggesting the added advantage of stretching film at one force to obtain a level of elongation while the force to maintain that degree of stretch is less than the original stretching force. Thimon's explanation of stretching film and maintaining film elongation is suggesting an elementary explanation of inelastic strain recovery as used in the '510 patent. Notwithstanding the existence of objective criteria of nonobviousness, this Court, when considering the scope and content of the pertinent art, one skilled in the art and the relatively slight differences between the '510 patent and the prior art, determines that the '510 patent would have been obvious to

one skilled in the art. Therefore, pursuant to 35 U.S.C. §103, this Court determines that the '510 patent is invalid.

II. Ineqitable Conduct

- 36. Inequitable conduct or fraud on the PTO precludes enforcement of a patent. J. P. Stevens & Co., Inc. v. Lex Tex Ltd., Inc., 747 F. 2d 1553, 1560 (Fed. Cir. 1984), cert. denied sub nom, 474 U. S. 882 (1985).
- 37. Inequitable conduct that precludes enforcement of a patent is broader than "common law fraud" and includes an intentional or grossly negligent failure to bring material information to the attention of the examiner, constituting a breach of the duty of candor required of patent applicants and their attorneys in prosecuting patent applications in PTO. J. P. Stevens, 747 F. 2d at 1559 (citing Norton v. Curtiss, 433 F. 2d 779, 793-94 (C. C. P. A. 1970)); A. B. Dick Co. v. Burroughs Corp., 798 F. 2d 1392, 1396 (Fed. Cir. 1986).
- 38. The unenforceability of a patent due to the exercise of fraud, inequitable conduct, or bad faith in the prosecution of a patent application before the PTO stems from the interest which the public has in seeing that patent monopolies result from backgrounds free from fraud or other inequitable conduct. True Temper Corp. v. C F & I Steel Corp., 601 F. 2d 495, 501 (10 Cir. 1979) (citing Precision Instrument Mfg. Co. v. Automotive Maintenance Machinery Co., 324 U. S. 806, 816 (1945)).
- 39. Because the PTO lacks proper means for fully investigating patent claims, a patent applicant stands before it in a confidential relationship. The system could not function successfully if an applicant were to approach the PTO as an adversary. True Temper, 601 F. 2d at 501 (citing Beckman Instruments, Inc. v. Chemtronics, Inc., 428 F. 2d 555, 565 (5th Cir.), cert. denied, 400 U. S. 956 (1970)).

- 40. The applicants owe an absolute duty of full and complete disclosure of all matters reflecting adversely upon his or her patent. True Temper, 601 F. 2d at 501 (citing Shaffer Tool Works v. Joy Mfg. Co., 352 F. Supp. 824 (S. D. Tex. 1972)); 37 C. F. R. §1.56(a)&(b) (1987).
- 41. To sustain the defense of inequitable conduct, Kaufman must prove the following two elements by clear and convincing evidence: "(1) that [applicants] misrepresented or failed to disclose material information to the [PTO] in the prosecution of the patent, and (2) that such misrepresentation was intentional." Allen Archery, Inc. v. Browning Mfg. Co., 819 F. 2d 1087, 1094 (Fed. Cir. 1987). The term inequitable conduct includes acts of "commission, e.g., submission of false information, as well as omission, e.g., failure to disclose material information." J. P. Stevens, 747 F. 2d at 1559.
- 42. The two elements of inequitable conduct materiality and intent must initially be determined separately as matters of fact, because in the absence of either, there can be no determination of inequitable conduct. Allen Archery, 819 F. 2d at 1094-95; J. P. Stevens, 747 F. 2d at 1559-60. Inequitable conduct first requires proof by clear and convincing evidence of (a) a threshold of materiality of the non-disclosed or misrepresented information and (b) a threshold of the applicants' intent to mislead the PTO. Carella v. Starlight Archery & Pro Line Co., 804 F. 2d 135, 140, petition for reh'g granted, 1 U.S.P.Q. 2d 1209 (Fed. Cir. 1986); Pacific Furniture Mfg. Co. v. Preview Furniture Corp., 800 F. 2d 1111, 1114 n. 7 (Fed. Cir. 1986); J. P. Stevens, 747 F. 2d at 1560-62.
- 43. Where the thresholds of materiality and intent are established, the court must conduct a balancing test and determine, as a matter of law, whether the scales compel a conclusion that inequitable conduct occurred. N.V. Akzo v. E. I. du Pont de Nemours, 810 F. 2d 1148, 1153 (Fed. Cir.

1987); Atlas Powder Co. v. E. L. du Pont de Nemours & Co., 750 F. 2d 1569, 1578 (Fed. Cir. 1984).

- 44. Where the level of materiality of the misrepresented or withheld information is quite low, a very high level of intent must be proved to render the patent unenforceable. In contrast, the higher the materiality of information, the lower the level of intent that must be proven. Akzo, 810 F. 2d at 1153; American Hoist & Derrick Co. v. Sowa & Sons, Inc., 725 F. 2d 1350, 1363 (Fed. Cir.), cert. denied, 469 U.S. 821 (1984).
- 45. To determine whether a reference is material in the context of inequitable conduct before the PTO

requires proof by clear and convincing evidence of a threshold degree of materiality of the nondisclosed or false information. It has been indicated that the threshold can be established by any four tests: (1) objective "but for"; (2) subjective "but for"; (3) "but it may have been"; and (4) PTO Rule 1.56(a), i.e., whether there is a substantial likelihood that a reasonable examiner would have considered the omitted reference or false information important in deciding whether to allow the application to issue as a patent. American Hoist, 725 F. 2d at 1362, 220 USPQ at 772-The PTO standard is the appropriate starting point because it is the broadest and because it most closely aligns with how one ought to conduct business with the PTO. American Hoist, 725 F. 2d at 1363, 220 USPQ at 773.

J. P. Stevens, 747 F. 2d at 1559.

46. PTO Rule 1.56(a), 37 C.F.R. §1.56(a), provides the basis for the threshold of materiality of any withheld or misrepresented information. Akzo N.V. v. U.S. Int'l Trade Comm'n, 808 F. 2d 1471, 1481 (Fed. Cir. 1986), cert. denied, 107 S. Ct. 2490 (1987).

- 47. The issue under Rule 1.56(a) is whether there is a substantial likelihood that a reasonable examiner would have considered the omitted or false information important in deciding whether to allow the application to issue as a patent. *Atlas Powder*, 750 F. 2d at 1578.
- 48. In the event that a threshold level of materiality of the withheld or misrepresented information is established, it is then necessary for the party asserting inequitable conduct in the procurement of the patent to establish a threshold level of intent. Intent may be established by proving acts the natural consequences of which are presumably intended by the act. American Hoist, 725 F. 2d at 1363. The party asserting inequitable conduct need not prove intent with direct evidence. J. P. Stevens, 747 F. 2d at 1560. However, "simple negligence, oversight, or an erroneous judgment made in good faith, is insufficient" to establish intent, and this may be a defense to the claim of inequitable conduct. J. P. Stevens, 747 F. 2d at 1560; Akzo, 810 F. 2d at 1153, (citing J. P. Stevens, 747 F. 2d at 1560).
- 49. Proof by clear and convincing evidence of gross negligence may be sufficient to establish a threshold intent. *Akzo*, 810 F. 2d at 1153.
- 50. Inequitable conduct is not established by simply showing that art or information having some degree of materiality was not disclosed. A party will not be guilty of inequitable conduct unless he "intended to act inequitably." FMC Corp. v. Manitowoo Company, Inc., 835 F. 2d 1411, 1415 (Fed. Cir. 1987).
- 51. A party who asserts a "failure to disclose" form of inequitable conduct may prove its case by offering clear and convincing proof of: "(1) prior art or information that is material; (2) knowledge chargeable to applicant of that prior art or information and of its materiality; and (3) failure of the applicant to disclose the art or informa-

tion resulting from an intent to mislead the PTO." Id. (footnote omitted.)

- "(a) the prior art or information was not material (e.g., because it is less pertinent than or merely cumulative with prior art or information cited to or by the PTO); (b) if the prior art or information was material, a showing that applicant did not know of that art or information; (c) if applicant did know of that art or information, a showing that applicant did not know of its materiality; (d) a showing that applicants' failure to disclose art or information did not result from an intent to mislead the PTO." Id. However, when a party asserting the validity of a patent conducts demonstrations for the examiner of prior art, that party must make an honest effort to duplicate the teachings of the prior art. Allen Archery, 819 F. 2d at 1093.
- 53. Throughout the prosecution of the Parent and Continuation Applications, the applicants were aware of inhouse test data demonstrating the '806 conventional stretch wrapping machine's capability of stretching film consistently and substantially over the yield. However, the applicants carefully orchestrated their discussions and demonstrations for the examiner to distinguish the '806 machine and the Thimon patent from the claims of the '510 patent. Because the applicants were aware of the examiner's position with respect to the teachings of the '806 patent's disclosure of the stretching of film beyond the yield point, they were at least grossly negligent in failing to disclose the existence of the in-house test data.
- 54. Instead of disclosing this information, the applicants attempt to qualify the teachings of the '806 patent as not being able to stretch film over the yield point in a commercially repetitive environment.
- 55. The in-house test data which the applicants withheld from the examiner was the type of information that

a reasonable examiner would have considered important in deciding whether to allow the applications to issue as a patent. Further, the applicants' attempt to qualify the capabilities of the '806 patent in a commercially repetitive environment does not negate the high level of materiality of the in-house test data. Even if the '806 patent could not stretch film over the yield point in a commercially repetitive environment, this Court determines that a reasonable examiner still would have considered the test data important in deciding whether to allow the Continuation Application to issue.

- 56. Given the high level of materiality of the omitted noncumulative information and the applicants' knowledge that the examiner was not allowing the claims based on the teaching of the Thimon in combination with '806 patents' capability of stretching film over the yield point, this Court determines that the applicants at the very least were grossly negligent in not disclosing the in-house test data and in conducting the demonstrations for the PTO during the prosecution of the '510 patent.
- 57. Therefore, because the applicants engaged in inequitable conduct during the prosecution of the '510 patent, the '510 patent is unenforceable.³

III. Infringement

58. Lantech bears the burden of proving by a preponderance of the evidence that Kaufman has infringed one

³Because the '510 patent is invalid and unenforceable, the Court need not consider the issue of infringement. However, when presented with issues of validity, enforceability and infringement as the Court is in this present action, the better practice is to decide all issues. Simmons Fastner Corp. v. Illinois Tool Works, Inc., 793 F. 2d 1573, 1576 (Fed. Cir. 1984), cert. denied, 471 U.S. 1065 (1985) (citing Lindemann Machinefabrik, GMBH v. American Hoist & Derrick Co., 730 F. 2d 1452, 1463-64 (Fed. Cir. 1984)).

or more of the claims of the '510 patent under 35 U.S.C. §271. Rite-Hite Corp. v. Kelley Co., Inc., 819 F. 2d 1120, 1123 (Fed. Cir. 1987); Hughes Aircraft Co. v. United States, 717 F. 2d 1351, 1361 (Fed. Cir. 1983). Lantech will satisfy its burden of proof if it shows that it is more likely than not that Kaufman has infringed one or more of the claims of the '510 patent.

59. Lantech need not present direct evidence of infringement of the '510 patent by Kaufman to sustain its burden of proof on this issue. Circumstantial evidence of infringement is sufficient. Alco Standard Corp. v. TVA, 808 F. 2d 1490, 1503 (Fed. Cir. 1986), cert. dismissed 108 S. Ct. 26 (1987); Moleculon Research Corp. v. CBS, Inc., 793 F. 2d 1261, 1272 (Fed. Cir. 1986), cert. denied, 107 S. Ct. 875 (1987).

A. Direct Infringement

- 60. Section 271(a) of Title 35 provides "[e]xcept as otherwise provided in this title whoever without authority makes, uses or sells any patented invention, within the United States during the term of the patent therefor, infringes the patent." 35 U.S.C. §271(a) (1984).
- 61. It is not possible to infringe a process patent such as the '510 patent directly by the mere manufacture or sale of machinery designed to practice the process disclosed and claimed therein. *Dennison Mfg. Co.*, v. *Ben Clements & Sons, Inc.*, 467 F. Supp. 391, 427 (S.D. N.Y. 1979).
- 62. One using an apparatus practicing the patented process without authority of the owner infringes the patent in suit, regardless of knowledge of the patent, or lack thereof, or intent to infringe on his part. Wilden Pump & Eng'g Co. v. Pressed & Welded Prods. Co., 655 F. 2d 984, 989 (9th Cir. 1981); A. Stucki Co. v. Schwam, 634 F. Supp. 259, 264 (E.D. Pa. 1986).

I. Literal Infringement

- 63. A determination of literal infringement essentially involves two inquiries: (1) what is patented, and (2) whether what is patented has been made, used or sold by another. The first inquiry is one of law. The second inquiry is a question of fact. Tillotson, Ltd. v. Walbro Corp., 831 F. 2d 1033, 1037 (Fed. Cir. 1987); McGill, Inc. v. John Zink Co., 736 F. 2d 666, 671-72 (Fed. Cir.), cert. denied, 469 U.S. 1037 (1984); Fromson v. Advance Offset Plate, Inc., 720 F. 2d 1565, 1569 (Fed. Cir. 1983).
- 64. In establishing what is patented, the meaning of the claims in the '510 patent must be learned from a study of all relevant patent documents. When a claim is in dispute, it is necessary to look at certain extrinsic evidence. Then the claims must be compared with the operation of the Kaufman powered prestretch machinery. Tillotson, 831 F. 2d at 1037; H. H. Robertson Co. v. United Steel Deck, Inc., 820 F. 2d 384, 389-90 (Fed. Cir. 1987); Radio Steel & Mfg. Co. v. MTD Products, Inc., 566 F. Supp. 609, 619 (N.D. Ohio 1983), modified on other grounds, 731 F. 2d 840 (Fed. Cir.), cert. denied, 469 U.S. 831 (1984).
- 65. Literal infringement is determined solely on the basis of the claims and not upon a comparison of the operation of alleged infringing machinery with a commercial embodiment of the invention claimed in the '510 patent. Tandon Corp. v. U.S. Int'l Trade Comm'n, 831 F. 2d 1017, 1028 (Fed. Cir. 1987); Loctite Corp. v. Ultraseal Ltd., 781 F. 2d 861, 866-67 (Fed. Cir. 1985); ACS Hospital Sys, Inc. v. Montefiore Hosp., 732 F. 2d 1572, 1578 (Fed. Cir. 1984).
- 66. If, as a result of comparing the claims in the '510 patent with the operation of the allegedly infringing machinery, that operation performs each and every step within a claim, literal infringement has been established. Graver

Tank & Mfg. Co. v. Linde Air, 339 U.S. 605, 607 (1950); Loctite, 781 F. 2d at 865-67.

a. Construction of Claims

- 67. The interpretation of claims is a legal matter which is not subject to the clearly erroneous standard of review applied to findings of fact. *Tillotson*, 831 F. 2d at 1037; *Howes* v. *Medical Components*, *Inc.*, 814 F. 2d 638, 643 (Fed. Cir. 1987); *Meloculon*, 793 F. 2d at 1270.
- 68. However, when the terms of a claim in a patent are disputed, the explanation of their meaning presents a question of fact. Therefore, extrinsic evidence may be used to aid the trier of fact in the explanation of such terms. Howes, 814 F. 2d at 643; Palumbo v. Don-Joy Co., 762 F. 2d 969, 974 (Fed. Cir. 1985).
- 69. In construing language of claims, the Court may consider the following for assistance: (1) the claims at issue; (2) the file history of the patent; (3) the specification; (4) the other claims in the patent; and (5) expert testimony. *McGill*, 736 F. 2d 672-675.
- 70. Each claim of the '510 patent is considered separately. Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, 796 F. 2d 443, 446 (Fed. Cir. 1986), cert. denied, 108 S. Ct. 85 (1987).
- 71. In the '510 patent, claim 1 is representative for purposes of infringement except claims 2 through 4 differ from claim 1 in the degree of prestretch elongation required. Perkin-Elmer Corp. v. Computervision Corp., 732 F. 2d 888, 896 (Fed. Cir.), cert denied, 469 U.S. 857 (1984); Raytheon Co. v. Roper Corp., 724 F. 2d 951, 960 (Fed. Cir. 1983), cert. denied, 469 U.S. 835 (1984).
- 72. In determining the meaning of words in a claim, the patentee is his own lexicographer. *Loctite*, 781 F. 2d at 867; *Fromson*, 720 F. 2d at 1569.

- 73. Although the inventor may coin a new expression because he may not be schooled in the terminology of the technical art, the meaning of the expression must be reasonably clear and used consistently within the patent. Therefore, the inventor's meaning of the new expression must be discernible from the specification. Lear Siegler, Inc. v. Aeroquip Corp., 733 F. 2d 881, 889 (Fed. Cir. 1984).
- 74. Since the language of the '510 patent's claims are disputed, this Court has considered extrinsic evidence in determining the interpretation of the disputed terminology. Therefore, the disputed language is construed based on Findings of Fact, 81.
- 75. The Court has found that Kaufman and its customers have literally and directly infringed claims 1-4 of the '510 patent by using Kaufman powered prestretch machinery to perform each and every step of each claim.
- 76. The Court has found that Kaufman has "used" the process of the '510 patent within the meaning of 35 U.S.C. §271(a) in the following ways: (1) employees of Kaufman demonstrated Kaufman's powered prestretch machinery in a manner which practices the process disclosed and claimed in the '510 patent at its facility for the purpose of selling such machinery to its customers. Water Technologies Corp. v. Calco Ltd., 658 F. Supp. 961, 973-74 (N.D. Ill. 1986); (2) Kaufman employees operated Kaufman's powered prestretch machinery in a manner which practices the process of the '510 patent at customers' facilities in connection with the sale and installation thereof. Metal Arts Co. v. Fuller Co., 389 F. 2d 319, 325 (5th Cir. 1968); Saf-Gard Prods., Inc. v. Service Parts, Inc., 370 F. Supp. 257, 272 (D. Ariz. 1974), aff'd, 532 F. 2d 1266 (9th Cir.), cert. denied, 429 U.S. 896 (1976); and (3) Kaufman employees used Kaufman's powered prestretch machinery to practice the process of the '510 patent at customers' facilities in connection with the repair and maintenance thereof.

Preemption Devices v. Minnesota Mining & Mfg. Co., 803 F. 2d 1170, 1174-75 (Fed. Cir. 1986).

B. Inducement of Infringement

- 77. Section §271(b) of Title 35 provides: "[w]hoever actively induces infringement of a patent-shall be liable as an infringer." 35 U.S.C. §271(b) (1984).
- 78. The term "inducement" under 35 U.S.C. §271(b) is "as broad in scope as the range of actions by which one may cause, urge, encourage or aid another to infringe." Burlington Indus., Inc. v. Exxon Corp., 379 F. Supp. 754, 757 (D. Md. 1974).
- 79. Active inducement of infringement consists of the following three elements: (1) some purposeful action on the part of the alleged infringer in furtherance of an actual infringement of the patent in suit, EWP Corp. v. Reliance Universal, Inc., 221 U.S.P.Q. 542, 554 (S.D. Ohio 1983), rev'd on other grounds, 755 F. 2d 898 (Fed. Cir.), cert. denied, 474 U.S. 843 (1985); (2) direct infringement of the patent in suit by the party induced by the alleged infringer, Met-Coil Sys. Corp. v. Korners Unlimited, Inc., 803 F. 2d 684, 687 (Fed. Cir. 1986); and (3) knowledge by the alleged infringer of the likely infringing result of the induced party's use of the machinery to practice the process of the patent in suit. Procter & Gamble Co. v. Nabisco Brands, Inc., 604 F. Supp. 1485, 1488 (D. Del. 1985); Rohm & Haas Co. v. Dawson Chemical Co., 557 F. Supp. 739, 814 (S.D. Tex.), rev'd on other grounds sub nom, Rohm & Haas Co. v. Crystal Chemical Co., 722 F. 2d 1556 (Fed. Cir. 1983), cert, denied, 469 U.S. 851 (1984).
- 80. The following activities on the part of Kaufman will support a finding of active inducement of another to directly infringe a process patent: (1) selling an apparatus capable of practicing the process disclosed and claimed in

the '510 patent with instructions and directions to the purchaser as to how to use it to practice the process disclosed in the '510 patent, Rohm & Haas, 557 F. Supp. at 814-15; (2) advertising and otherwise promoting the use of its powered prestretch machinery to practice the process of the '510 patent, Saf-Gard Products, 370 F. Supp. at 272; Rohm & Haas, 557 F. Supp. at 814-15; (3) repairing and maintaining its powered prestretch machinery for customers, Grinnell Corp. v. American Monorail Co. 285 F. Supp. 219, 227 (D.S.C. 1967); (4) agreeing to indemnify customers against patent infringement claims arising from their use of its powered prestretch machinery to practice the process of the '510 patent, EWP Corp., 221 U.S.P.Q. at 554; Sing v. Culture Prods., Inc., 469 F. Supp. 1249, 1255 (E.D. Mo. 1979); and (5) accepting orders from customers for its powered prestretch machinery where Kaufman knows that they will use it to practice the process of the '510 patent, notwithstanding the fact that Kaufman did not actively advertise or recommend the product. EWP Corp., 221 U.S.P.Q. at 554.

- 81. Inducement of infringement of a method claim of a patent may be established by circumstantial evidence if a direct infrigement occurs as a result of the accused infringer's acts. *Moleculon Research*, 793 F. 2d at 1272.
- 82. Based upon Findings of Facts 92-95, the Court has found that Lantech has met its burden of proving by a preponderance of the evidence that Kaufman actively and knowingly induced others to practice every step of one or more of the '510 patent claims.

C. Contributory Infringement

83. Section §271(c) of Title 35 provides in pertinent part: "[w]hoever sells . . . a material or apparatus for use in practicing a patented process, constituting a material

part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributor infringer."

35 U.S.C. §271(c)(1984).

- 84. Under this provision, in order to establish contributory infringement of the process claims of the '510 patent, Lantech must establish the following by a preponderance of the evidence: (1) that the alleged infringer sold an apparatus for use in practicing a patented process; (2) that the alleged infringer knew the apparatus to be especially adapted for use in the infringement of the patent; (3) that the apparatus was not a staple article suitable for substantial noninfringing use; and (4) that the customer who purchased the apparatus directly infringed the patent by using the purchased item to practice the claimed process. Deepsouth Packing Co., Inc. v. Laitram Corp., 406 U.S. 518, 526 (1972); Preemption, 803 F. 2d at 1174-75; Rohm & Haas, 557 F. Supp. at 815 (citing Aro Mfg. Co., Inc. v. Convertible Top Replacement Co., 377 U.S. 476, 485-90 (1964)).
- 85. To sustain a finding under 35 U.S.C. §271(c) that the alleged infringer knew the accused apparatus to be especially adapted for an infringing use, it must be established that it had actual knowledge of the patent prior to commencement of the action and that the device which it manufactured was capable of practicing the process thereof. Aro Mfg., 377 U.S. at 488; Filmways Pictures, Inc. v. Marks Polarized Corp., 552 F. Supp. 863, 870 (S.D. N.Y. 1982).
- 86. A letter from the patentholder notifying the alleged contributory infringer of the patent and claim of infringement supplies the necessary element of knowledge under 35 U.S.C. §271(c). Aro Mfg., 377 U.S. at 488-90.

- 87. Knowledge by the alleged infringer that customers used its machinery to practice the process of the patent in suit is further evidence of the necessary element of intent under 35 U.S.C. §271(c). Fromberg, Inc. v. Thornhill, 315 F. 2d 407, 410-14 (5th Cir. 1963). In addition, the absence of a substantial noninfringing use for the machinery warrants an inference of an intent to contributorily infringe. Id.
- 88. Whether Kaufman's powered prestretch machinery constitutes a staple article or commodity of commerce suitable for substantial noninfringing use is essentially a question of fact. *Fromberg*, 315 F. 2d at 414-15.
- 89. In determining-whether Kaufman's powered prestretch machinery constitutes a staple article of commerce suitable for substantial noninfringing use, the quality, quantity and efficiency of its suggested alternate uses are to be considered. Reynolds Metal Co. v. Aluminum Co. of America, 457 F. Supp. 482, 509 (N.D. Ind. 1978), rev'd on other grounds, 609 F. 2d 1218 (7th Cir. 1979), cert. denied, 446 U.S. 989 (1980); Rohm & Haas, 557 F. Supp. at 815.
- 90. The suggested noninfringing use must not be implausible, impractical or merely experimental. Simms v. Mack Trucks, Inc., 459 F. Supp. 1198, 1218-19 (E.D. Pa. 1978), rev'd on other grounds, 608 F. 2d 87 (3rd Cir. 1979), cert. denied, 445 U.S. 930 (1980).
- -91. Suggested alternate uses of the machinery which are less efficient or more expensive than using it in a manner which practices the process of the '510 patent are not sufficient to avoid liability as a contributory infringer under 35 U.S.C. §271(c). Reynolds Metal, 457 F. Supp. at 509; Bliss & Laughlin Indus., Inc. v. Bil-Jax, Inc., 356 F. Supp. 577, 580-81 (N.D. Ohio 1972); EWP Corp., 221 U.S.P.Q. at 554.
- 92. If there is no other known commercial use for the machinery except to practice the process disclosed and

claimed in the patent in suit, Kaufman will be liable for contributory infringement. Rohm & Haas Co. v. Owens-Corning Fiberglas Corp., 196 U.S.P.Q. 726, 745 (N.D. Ala. 1977).

93. Based on Findings of Fact 95-99, the Court finds that Lantech has met its burden of proving by a preponderance of the evidence that Kaufman's powered prestretch machinery is not a staple article of commerce suitable for a substantial noninfringing use, but is an apparatus knowingly designed and sold by Kaufman for the specific purpose of practicing the process covered by the '510 patent's claims constituting contributory infringement of the '510 patent by Kaufman.

IV. Attorney's Fees

- 94. Pursuant to 35 U.S.C. §285, a court may authorize the award of reasonable attorney's fees to the prevailing party in exceptional cases. *Boyer Aktiengesellschaft* v. *Duphar Int'l Research B.V.*, 738 F. 2d 1237, 1242 (Fed. Cir. 1984).
- 95. Exceptional cases include inequitable conduct during the prosecution of a patent. Orthopedic Equip. Co. v. All Orthopedic Appliances, Inc., 707 F. 2d 1376, 1383-84 (Fed. Cir. 1983), misconduct during litigation, Hughes v. Novi American, Inc., 724 F. 2d 122, 125 (Fed. Cir. 1984), vexations or unjustified litigation, Stickle v. Heublein, Inc., 716 F. 2d 1550, 1564 (Fed. Cir. 1983), or a frivolous suit. CTS Corp. v. Pipher Int'l Corp., 727 F. 2d 1550, 1558 (Fed. Cir. 1984).
- 96. Although the applicants took a position throughout the prosecution of the patent in suit which was ultimately determined to be in violation of their duty of candor, the the applicants did not engage in common law fraud or bad faith. As this Court has previously determined, applicants

were grossly negligent in failing to disclose highly material information to the examiner. This conduct does not automatically require a finding of an exceptional case warranting the award of attorney's fees. *Pennwalt Corp.* v. *Akzona, Inc.*, 570 F. Supp. 1097, 1115-16 (D. Del. 1983), *aff'd,* 740 F. 2d 1573 (Fed. Cir. 1984). Therefore, because of the circumstances of this case, the Court determines that this was not an exceptional case and that the Court will not award attorney's fees to Kaufman.

Therefore, for the foregoing reasons, good cause appearing, it is

Ordered that judgment be, and hereby is, entered in favor of defendant Kaufman Company of Ohio and against plaintiff, Lantech, Inc.

> (s) John W. Potter United States District Judge

I hereby certify that this instrument is a true and correct copy of the original on file in my office.

Attest: James S. Callas, Clerk
U.S. District Court
Northern District of Ohio

(s) By: Carol J. Ripey Deputy Clerk

Appendix 1

The claims of the '510 patent are as follows:

- 1. A process of making a unitary package by wrapping a plurality of units with a stretched plastic material overwrap forming a unitary load comprising the steps of:
 - a. placing a load on a support;
 - positioning a roll of stretchable plastic material on a dispenser means adjacent to said support;
 - c. withdrawing a leading end of said plastic material from said dispenser means and passing said plastic material through a powered prestretch device adapted to drive the plastic material at a proportional speed with respect to the surface speed of the load, said prestretch device comprising a powered roller assembly with at least one rotationally restrictive roller assembly, said rotationally restrictive roller assembly being retarded to a substantially constant relative speed with respect to the rotationally powered roller assembly so that the plastic material is elongated substantially above its yield point between the roller assemblies, thereby changing strength characteristics and cross-sectional area of the plastic material;
 - d. holding said plastic material adjacent said load and simultaneously prestretching said plastic material substantially above the yield point by driving said prestretch device and causing relative rotation between said load and said dispenser means at a predetermined speed;
 - e. substantially reducing the force on the plastic material while maintaining the majority of the

- elongation incurred in said powered prestretch device through inelastic strain recovery after it leaves the powered prestretch device; and
- f. covering the load with previously elongated plastic material so that the units of the load are held under a compressive force.
- 2. A process for spirally wrapping a web of stretched film on a load comprising a plurality of units to form a unitary package, which process is repeated in a commercial environment comprising the steps of:
 - a. withdrawing film from a roll through a powered prestretch means comprising a powered roller assembly and at least one restrictive roller assembly interconnected by speed control means and retarded to maintain a substantially fixed relative speed, the speed of the restrictive roller assembly being less than said powered roller assembly, and holding the film adjacent to the load;
 - b. activating the powered prestretch means to drive the film at a downstream speed increased from its upstream speed to produce film elongation above one hundred percent and the yield point of the film;
 - c. forming a spiral wrap around the load by causing relative rotation of the load and the powered prestretch means while substantially reducing film stress and maintaining a majority of film elongation incurred in said powered prestretch means through inelastic strain recovery between the load and the powered prestretch means;
 - d. forming a fastened web section by fastening a leading film portion of the wrap to a trailing film portion of the wrap; and ~

- e. severing said film between the film roll and the fastened web section.
- 3. A process for spirally wrapping a stretched plastic film web on an angular load comprising a plurality of units to form a unitary package comprising the steps of:
 - a. withdrawing the film web from a film web roll through a powered prestretch device comprising a positively rotationally powered downstream roller assembly and a rotational restricted upstream roller means, and holding the film web adjacent a load;
 - b. activating the prestretch device to drive the film web at a downstream speed on the powered roller assembly which is substantially greater than an initial upstream film web speed on the retarded upstream roller means sufficient to produce a film web elongation above one hundred percent and substantially above the yield point of the film web;
 - c. simultaneously initiating relative rotation of the load and the film web roll to achieve a force on the film web from the roller assembly to the load which is less than the force on the film web in the prestretch device while maintaining a majority of elongation incurred in said prestretch device to produce inelastic strain recovery of the film web as it is wrapped around the load;
 - d. spirally wrapping the load;
 - e. fastening a trailing end of the film web to an underlying film web layer; and
 - f. severing the film from the load.

- 4. A process of making a unitary load by wrapping a plurality of units with a stretched film web overwrap forming a unitary load comprising the steps of:
 - a. elongating the film web in a prestretching means at least fifty percent over the yield point while obtaining elongation of the film web over one hundred percent by subjecting the film web to differential surface speeds through engagement of a powered roller and a restricted roller, said restricted roller being retarded thereby causing said film web to elongate and gain substantially in strength per cross-sectional area and modulus;
 - b. wrapping the load with prestretched film web by causing relative movement between said prestretching means and said load while reducing the force on the film web from the prestretching means to the load substantially below the force applied to stretch the film web in the prestretching means and retaining the majority of the elongation through inelastic strain recovery between the prestretching means and the load.

UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF OHIO WESTERN DIVISION

Case No. C 85-7190

LANTECH, INC.

v.

KAUFMAN COMPANY OF OHIO

JUDGMENT IN A CIVIL CASE

- Jury Verdict. This action came before the Court for a trial by jury. The issues have been tried and the jury has rendered its verdict.
- Decision by Court. This action came to trial or hearing before the Court. The issues have been tried or heard and a decision has been rendered.

IT IS ORDERED AND ADJUDGED

that judgment be and hereby is entered in favor of Defendant Kaufman Company of Ohio and against plaintiff Lantech, Inc.

(s) John W. Potter United States District Judge

June 27, 1988 Date James S. Gallas Clerk

(s) Carol J. Ripey (By) Deputy Clerk

UNITED STATES COURT OF APPEALS

FOR THE FEDERAL CIRCUIT

88-1541, -1551

LANTECH, INC., -

- - Plaintiff-Appellant,

v.

KAUFMAN COMPANY OF OHIO, INC.,

ORDERED and ADJUDGED:

- Defendant/ Cross-Appellant.

JUDGMENT

ON APPEAL from the United States District Court for the Northern District of Ohio in CASE NO(S). C85-7190 This CAUSE having been heard and considered, it is

AFFIRMED.

Entered By Order of The Court

(s) Francis X. Gindhart Francis X. Gindhart, Clerk

Dated June 16, 1989

UNITED STATES COURT OF APPEALS

FOR THE FEDERAL CIRCUIT

88-1541, -1551

Lantech, Inc., - - - Plaintiff-Appellant,

v.

Kaufman Company of Ohio, Inc., - Defendant/ Cross-Appellant.

ORDER

Before Bissell, Circuit Judge, Archer, Circuit Judge, and Re, Circuit Judge

A petition for rehearing having been filed in this case, Upon Consideration Thereof, it is

Ordered that the petition for rehearing be, and the same hereby is, denied.

Judge Bissell would grant the petition.

The suggestion for rehearing in banc is under consideration.

This mandate will issue on September 8, 1989.

For the Court,

(s) Francis X. Gindhart Francis X. Gindhart Clerk

Dated: September 1, 1989

cc: John S. Reed Mark C. Schaffer

UNITED STATES COURT OF APPEALS

FOR THE FEDERAL CIRCUIT

88-1541, -1551

Lantech, Inc., - - - Plaintiff-Appellant,

Kaufman Company of Ohio, Inc., - Defendant/ Cross-Appellant.

ORDER-Filed September 14, 1989

 Λ suggestion for rehearing in banc having been filed in this case,

UPON CONSIDERATION THEREOF, it is

Ordered that the suggestion for rehearing in banc be, and the same hereby is, declined.

For the Court,

(s) Francis X. Gindhart Francis X. Gindhart Clerk

Dated: September 14, 1989

cc: John S. Reed Mark C. Schaffer

v. .

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A major source of information about the CAFC, and the various Circuit Judges' views on patent and trademark law, has thus far not been made readily available to the patent and trademark bar. The majority of the CAFC's intellectual property cases issue as "Unpublished" patent and trademark opinions. As a group they very often tell half or more of the story at the point that the court's published patent and trademark opinions leave off (even though the "unpublished" opinions are not citable as precedent). Prior to PRI's newly added service, those slip opinions had to be individually purchased from the court. For example, in an unpublished opinion on June 16, 1989, styled Lantech, Inc. v. Kaufman Co., Circuit Judge Archer and Chief Judge Re (Ct. of Int'l Trade) affirmed a trial court's holding of \$103 obviousness which would, were it

precedent, wipe out most of the CAFC and CCPA law on

the subject that was painstakingly developed during the last 20 years (Circuit Judge Bissell dissented vigorously in Lantech). In fact, the Lantech majority's "unpublished" opinion is in direct conflict with the recent cases of In re Wright and Datascop Corp. v. SMEC, Inc. Moreover, as the dissent in Lantech showed, the majority panel's affirmance of the trial court's holding of unenforceability for inequitable conduct is a sub silentio reversal of the court's recent en banc decision in Kingsdown Medical v. Hollister, Inc.